

The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The Mining Journal is Registered at the General Post Office as a Newspaper and for Transmission Abroad.]

No. 2455.—Vol. LII.

LONDON, SATURDAY, SEPTEMBER 9, 1882.

WITH SUPPLEMENT. PRICE SIXPENCE. BY POST, £1 4s PER ANNUM.

MR. JAMES H. CROFTS, STOCK AND SHARE BROKER AND MINING SHARE DEALER,
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
ESTABLISHED 1842.

BUSINESS transacted in all descriptions of MINING Stocks and Shares (British and Foreign), Consols, Bonds (Foreign and Colonial), Railways, Insurance, Assurance, Telegraph, Tramway, Shipping, Canal, Gas, Water, and Dock Shares, and all Miscellaneous Shares.

BUSINESS negotiated in Stocks and Shares not having a general market value.

Every Friday a general and reliable List issued (a copy of which will be forwarded on application), containing closing prices of the week.

MINES INSPECTED.

BANKERS: CITY BANK, LONDON—SOUTH CORNWALL BANK, ST. AUUSTELL.

SPECIAL DEALINGS in the following, or part:—

50 Almada, 13s. 3d.	50 Kapanga, 18s. 9d.	30 Panulicillo, £6 15s.
20 Bedford United, £24 6	25 Killifreth, £2 3s. 9d.	30 Prince of Wales, 7s. 6d.
10 Bratsberg, 35s.	50 La Plata, £2 3s.	call paid.
20 Carnarvon Cop., 7s. 9	20 Langford, 9s.	80 Pestana, 4s. 9d.
50 Callao Bis, 7s. 9d.	80 Last Chance, 9s.	20 Ruby, £2 2s. 6d.
25 Chile Gold, 13s. 6d.	10 Leadhills, £3 1/2s.	50 Rhodes Reef, 19s.
50 Consolidated, 9s.	50 Marke Valley, 9s.	20 Richmond, £8 5s.
40 Devala Cen., 20s.	10 Mona, £4 10s.	20 Roman Grav., £9.
20 D'Eschey Mount, 13s. 6	25 Mounts Bay, 8s. 9d.	25 Sierra Buttes, 27s. 6d.
20 Devon Con., £5 1/2s.	25 Morla Du, 5s.	25 S. Condurrow, £9 1/2s.
50 Devon Friend., 4s. 6d.	50 Mysore Gold, 11s. 3d.	50 South Darren.
70 Don Pedro, 5s. 6d.	75 Mysore Reef, 3s.	50 S. E. Wynnad, £11 1/3
80 Drakeville, 10s.	60 No. Herodfoot, 3s.	60 So. Devon Uni., 18s. 9
50 East Blue Hills, 10s.	50 Nouv. Monde, 8s. 3d.	50 Sortridge, 4s.
40 E. Chiverton, 30s. c.p.	20 No. Penstruthal, 7s. 6	100 Simon's Reef, 2s. 6d.
10 East Lovell, 25s. c.p.	call paid.	50 Tanker, Gt. Con., 5s. 6
20 E. Roman Grav., 8s.	50 New W. Caradon, 3s. 9	100 West Devon, 6s. 3d.
25 Frontino, £2 13s. 9d.	call paid.	50 West Phoenix, 10s.
70 Glenrock, 25s.	70 Old Owlcombe, 2s.	50 West Caradon, 8s. c.p.
50 Glenroy, 5s.	50 Old Shepherds, 14s.	50 West Crebhor, 9s.
25 Gold Coast, 26s.	25 Organos, £2 1/2s.	20 West Polbreen, 18s. 9d.
50 Grogwinlon.	20 Pandina, 5s.	20 West Kitty, £14 1/2s.
25 Gwydyr Amal., off. w.	50 Polrose.	20 Wheel Crebhor, £2 5s.
20 Hingston Down, 14s.	50 Port Phillip, 4s.	50 Wheel Jane, 20s.
30 Hoover Hill, 4s. 9d.	50 R. J. 10s.	50 Wheel Jewell, 2s. 6d.
150 Herodfoot, 4s. 3d.	25 Parys Copper, 8s.	20 Wheel Kitty.

* * * SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS) ON DEPOSIT OF TWENTY PER CENT.

* * * SPECIAL BUSINESS AT CLOSE PRICES in all Market TIN, COPPER and LEAD SHARES.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

RAILWAYS—FOREIGN BONDS—SPECIAL BUSINESS.
Fortnightly Accounts opened on receipt of the usual cover.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

AMERICAN AND CANADIAN STOCKS AND SHARES—SPECIAL BUSINESS.
Fortnightly Accounts opened on receipt of the usual cover.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

OPTIONS, SINGLE or DOUBLE, dealt in at close market prices.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

INDIAN GOLD MINES.—SPECIAL BUSINESS in:—
Devala Moyer.
Devala Central.
Indian Consolidated.
Indian Glenrock.
Indian Phoenix.
Indian Kingston.
Indian Trevelyan.
Mysore.
Rhodes Reef.
South-East Wynaad.
Tambacherry.
Wynaad Perseverance.

At CLOSE MARKET PRICES, free of commission.
* * * Reliable information given on any of the above. A daily price list issued giving closing quotations. SPECIAL BUSINESS in La Plata, Rio Tinto, Frontino and Bolivia, Potosi, Chile, Nouveau Monde, Ruby, Richmond.

* * * SHARES IN THE ABOVE INDIAN OR OTHER GOLD AND SILVER MINES SOLD FOR FORWARD DELIVERY ONE, TWO, OR THREE MONTHS ON DEPOSIT OF TWENTY PER CENT.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

ESTABLISHED 1842.

MR. W. H. BUMPUS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER
44, THREADNEEDLE STREET, LONDON, E.C.
ESTABLISHED 1867.

BUSINESS transacted in STOCK EXCHANGE SECURITIES

AND MISCELLANEOUS SHARES of every description.

RAILWAYS, BANKS, FOREIGN AND COLONIAL BONDS.

TRAMWAYS, TELEGRAPHS, and all the LEADING INVESTMENTS.

Accounts opened for the Fortnightly Settlement.

A List of Investments free on application.

Mr. BUMPUS has SPECIAL BUSINESS in the undermentioned:—
50 Almada, 12s. 6d.
50 Bratsberg.
30 Bedford United, £23 1/2
50 Beich United.
100 Chile Gold, 13s. 9d.
70 Canada Copper, 21s. 6
25 Copiapo, £3 1/2s.
5 Carn Brea.
3 Cape Copper, £52 1/2s.
100 Carnarvon Copper.
75 Devon Friendship.
5s. 6d.
20 Devon Cons., £5 1/2s.
100 Devala Central, 19s. 6
150 Devala Moyer, 27s. 6d.
50 Don Pedro, 6s.
60 East Blue Hills, 10s. 6
100 Eberhard, 5s. 6d.
50 Frontino, £2 13s. 9d.
50 Gawton Copper 9s. 6d.

SPECIAL BUSINESS, at close prices, in the SHARES of all the principal HOME and FOREIGN MINES.

IMPORTANT TO INVESTORS.—Shares in SOUND DIVIDEND and PROGRESSIVE MINES (particularly TIN and COPPER) should be bought at present prices, as many of them are likely to have a considerable rise within the next few months.

Mr. BUMPUS devotes special attention to these Securities, and is in a position to afford reliable information and advice to intending investors and others.

WHEEL GRENVILLE and WEST GODOLPHIN shares are recommended for investment at present prices.

WILLIAM HENRY BUMPUS, SWORN BROKER.

OFFICES: 44, THREADNEEDLE STREET, LONDON, E.C.

ESTABLISHED 1867.

MR. E. J. BARTLETT, 30, GREAT ST. HELENS, LONDON, E.C.,
has special dealings in Stock Exchange Securities and Miscellaneous Shares of every description.

MESSRS. ENDEAN AND CO., STOCK AND SHARE DEALERS, 85, GRACECHURCH STREET, LONDON, E.C.
ESTABLISHED 1861.
Bankers: London and Westminster, Lothbury, E.C.

MESSRS. CUNLIFFE, ENTWISLE AND CO.,
FINANCIALISTS,
MINING AND CONSULTING ENGINEERS,
MINERAL ASSAYERS,
STOCK AND SHARE BROKERS,
77, BLOOMSBURY, OXFORD STREET; AND 2, UPPER BROOK STREET, MANCHESTER.

Bankers: Manchester and Oldham Bank (Limited),

Full Mail, Manchester.

BRITISH AND FOREIGN MINING OFFICES

MESSRS. PETER WATSON AND CO.,
AUSTIN PRIARS,
OLD BROAD STREET, LONDON, E.C.
BANKERS: THE ALLIANCE BANK (Limited).

MESSRS. PETER WATSON AND CO.'S
BRITISH AND FOREIGN MONTHLY MINING NEWS
—STOCK AND SHARE INVESTMENT NOTES—MINES,
MINERALS, AND METAL MARKETS—SHARE LIST,
No. 845, Vol. XVII., for SEPTEMBER month, is now ready,
and will be sent to customers on application.

Annual Subscription..... 5s. | Single Copy..... 5d

MESSRS. PETER WATSON AND CO.,
18, AUSTIN PRIARS, E.C.

MR. ALFRED E. COOKE,
DEALER IN BRITISH AND FOREIGN STOCKS AND SHARES
OF EVERY DESCRIPTION.
(FROM 75, OLD BROAD STREET)
ESTABLISHED 1853.
9, OLD BROAD STREET, LONDON.

STOCKS AND SHARES FOR SALE.
Mr. ALFRED E. COOKE can sell the following lots (or any smaller number of shares) to immediate applicants at prices annexed, free of commission:—

Where prices are not inserted, the market price of the day will be taken, or offers may be made:—

20 Bratsberg Cop., £1 15s	80 Indian Trevelyan	30 Pioneer Copper and
50 Callao Bis Gold, 8s.	Gold, 16s.	Lead, 10s.
30 Chile Gold, 13s.	50 Indian Consolidated,	80 Prince of Wales Cop.,
50 Canada Gold.	5s. 6d.	5s. 9d.
20 Canadian Copper.	50 La Plata Lead, £2 3s 3	5 Richmond Silver, 8 1/2
70 Devon Friend., 4s. 3d	20 Leadhills, £3 1/2s.	10 Ruby, 2 1/2s.
90 Drakeville Tin and	50 Langford Silver.	50 Rhodes Reef, 19s.
Copper, 10s.	50 Langford Silver.	30 South-East Wynaad
15 East Lovell Tin.	10 New Kitty Tin, £2 1/2s.	Gold, £3 1/2s.
20 East Rose Lead.	130 New West Caradon	80 Sortridge Copper and
70 E. Blue Hills Tin, 9s 9	Copper, 3s.	Tin, 4s.
25 Frontino Gold, £2 1/2s.	20 No. Herodfoot.	50 Tanker, Gt. Con., 5s.
25 Frongoch Lead.	80 Nouveau Monde Gold	35 W. Crebhor Cop., 8s.
60 Goginan Lead.	7s. 3d.	5 West Kitty Tin, 14 1/2s.
30 Gawton Copper.	50 North Blue Hills, 3s	30 W. Polbreen Tin, 21s.
50 Herodfoot, 4s. 6d.	20 Old Shepherds Lead	20 Wheel Jane Tin.
50 Indian Glenrock Gold	32 Organos, £2 1/2s.	5 Wheel Agar Tin.
100 Indian Phoenix, 1 1/2s.	40 Parys Copper, 7s.	20 W. Crebhor Cop., £2 1/2s.

Many of the above shares can be sold for settlement by arrangement at the end of October account on payment of 20 per cent. deposit. Shares not found in the above list may be purchased on application.

MR. ALFRED E. COOKE is a BUYER of shares in the following Mines:—
CALLAO BIS.
EAST ROSE.
INDIAN CONSOLIDATED.
LA PLATA.
MOUNTS BAY.

SELLERS must please state LOWEST POSSIBLE PRICE.

MR. ALFRED E. COOKE can transact business either as BUYER or SELLER in the ABOVE and in ALL OTHER MINES, also in RAILWAYS, FOREIGN STOCKS, AMERICAN RAILWAYS and STOCKS, and MISCELLANEOUS SHARES, FREE OF COMMISSION, ON THE BEST POSSIBLE PRICES. CLIENTS can frequently do business at BETTER PRICES than with any Broker in LONDON or the PROVINCES.

TELEGRAMS and LETTERS receive immediate attention. All shares currently dealt in, bought and sold, free of commission.

SPECULATIVE ACCOUNTS OPENED ON RECEIPT OF COVER.

PRICES of every description of STOCKS and SHARES are received continuously throughout the day from the STOCK EXCHANGE.

MR. ALFRED E. COOKE'S OFFICES are connected by TELEPHONE with the Subscribers to the United Telephone Company, whereby INSTANTANEOUS COMMUNICATION can be established in all parts of London. TELEPHONE NUMBER, 1268.

ALFRED E. COOKE, 9, OLD BROAD STREET, LONDON.

(Opposite the Stock Exchange, with which the offices are in DIRECT TELEGRAPHIC COMMUNICATION.)

MR. JAMES STOCKER, STOCKBROKER,

2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.

Has special business in the following for cash or settlement by arrangement:—

Almada, 12s. 9d.	Eberhard.	Parys Corporation, 8s.
Akankoo, 8s.	East Blue Hills, 9s. 6d.	Prince of Wales, 7s. 6d.
Bratsberg, 35s.	Gawton, 8s. 9d.	Pioneer, 9s. 6d.
Chile Gold, 13s. 6d.	Hoover Hill, 4s.	Rhodes Reef, 18s. 9d.
Consolidated Ind., 3s.	Indian Glenrock, 30s.	Ruby, 41s.
Clitters, £3 13s. 6d.	Indian Phoenix, 31s. 6d.	Richmond, £8 1/2s.
Callao Bis, 7s. 6d.	Kapanga, 15s. 6d.	Sortridge, 3s. 9d.
Colombian, 8s.	La Plata, 41s.	So. East Wynaad, £3 11 1/3
Chontales, 2s. 6d.	Leadhills, £3 1/2s.	Soulack.
Don Pedro, 6s.	Last Chance, 9s. 6d.	Tankerville, 6s.
Devon Friendship, 4s.	Mona Consols, 19s. 6d.	Van, £6.
Devala Moyer, 25s.	New Kitty, 51s.	West Crebhor, 3s. 6d.
Devala Central, 18s. 6d.	Nouveau Monde, 7s.	Wheel Crebhor, 43s.
	Organos, £2 13s. 6d.	Yuba River.

BANKERS: LONDON AND WESTMINSTER.

GRANVILLE SHARP, STOCK AND SHARE DEALER,

32, QUEEN VICTORIA STREET, LONDON, E.C.,

Recommends the purchase of shares in the

EAST CHIVERTON SILVER-LEAD MINE, and WHEEL JANE TIN MINE.

Full particulars on application.

BANKERS: LONDON AND WESTMINSTER, London, E.C.

HORACE J. TAYLOR, STOCK AND SHARE DEALER,

38, GREAT ST. HELENS, BISHOPSGATE STREET, LONDON, E.C.,

BUYS and SELLS every description of STOCKS and SHARES at the closest market prices of the day, either by telegram or letter. All enquiries promptly replied to.

BANKERS: THE CENTRAL BANK OF LONDON.

JOHN B. REYNOLDS, STOCK AND SHARE DEALER,

37, WALBROOK, LONDON, E.C.

Established Twenty-five Years.

BANKERS: LONDON JOINT-STOCK, Princes-street.

Mr. REYNOLDS transacts business in all descriptions of Mining Property at net prices. He is in a position to obtain reliable information respecting mining shares, and advises upon such information on the receipt of a fee of 21s. He spares neither time nor expense in securing for his numerous correspondents opportunities for obtaining the best investments. Fee allowed if business results.

Mr. REYNOLDS calls attention to the fact of his having persistently recommended West Kitty shares ever since they stood at 20s. each, and that when they stood at 10s. he cautioned holders, and gave his opinion that they would reach £15 this year. Others say they will reach £20.

Mr. REYNOLDS's letter is unavoidably postponed until next week.

WEST KITTY MINE AND TREVAUNANCE UNITED.

Reports of these important meetings appear in the Journal of Aug. 5, pages 958 and 959, and should be read by all interested and by the public generally.

NEW KITTY AND TREVAUNANCE.

Investors should strictly investigate the merits of these from reliable authority, and act accordingly. New Kitty meeting is reported in last week's Journal on page 1074.

WHEEL COATES.

Every shareholder should watch this concern as its prosperity depended upon his exertions. Highly important meeting reported in last week's Journal on page 1074.

THE
"DIFFERENTIAL"
PUMPING ENGINE
(DAVEY'S PATENT),
FOR

DRAINING MINES, WATER SUPPLY OF TOWNS, IRRIGATION,
SUPPLYING DOCKS, PUMPING SEWAGE, and GENERAL
PUMPING PURPOSES.

HATHORN, DAVEY, AND CO.,
LEEDS.

HATHORN, DAVEY, and Co. have Patterns of "Differential" Engines of all sizes, from 5 to 500-horse power, and have facilities for supplying very powerful Engines and Pumps at a short notice.

MR. CHARLES THOMAS,
MINING AGENT, STOCK AND SHARE DEALER,
3, GREAT ST. HELENS, LONDON, E.C.

MR. ALFRED THOMAS,
MINING AGENT, STOCK AND SHARE DEALER,
10, COLEMAN STREET, LONDON, E.C.

WHEEL SISTERS.—Wanted to Purchase, Shares herein. Sellers please state lowest price and number for sale.

HENRY GOULD SHARP, STOCK AND SHARE BROKER,
21, THREADNEEDLE STREET, LONDON, E.C.
ESTABLISHED 1852.

Bankers—London and County Bank, Lombard-street, London, E.C.

SAFE DIVIDEND INVESTMENTS IN STOCKS AND SHARES
PAYING 4 TO 8 AND 15 PER CENT. PER ANNUM ON OUTLAY.

SHARP'S INVESTMENT CIRCULAR.

THE SEPTEMBER EDITION (post free).

SHOULD BE CONSULTED BY INVESTORS AND SHAREHOLDERS IN STOCKS AND SHARES OF EVERY MARKETABLE DESCRIPTION.

A SAFE £9 5s. PER CENT. DIVIDEND INVESTMENT.

PHENIX UNITED TIN MINES,

near LISKEARD CORNWALL.

12,000 SHARES, £6 PAID. PRICE £3 5s. to £3 10s. PER SHARE.

H. GOULD SHARP STRONGLY RECOMMENDS the purchase of PHENIX UNITED SHARES at £3 5s. each, at which price they are paying 9 1/2 per cent. per annum. This has been one of the richest and most profitable mines in Cornwall. There is not a single mine in the two counties to compare with Phenix United. Looking at the future of this splendid property, shares are cheap at £3 per share, which would only be £22,000 for the whole property.

£206,400 HAS BEEN PAID IN DIVIDENDS UP TO DATE.

These mines have worked 70 years. There is a great future yet for this valuable property. They have an immense extent of tin ground laid open and yet to be worked.

THE BUILDINGS AND MACHINERY, ENGINES, &c., COST £70,000.

They are now selling over £4,000 worth of tin yearly. Sales will gradually and greatly increase, which will enable them to give large dividends upon the present price of shares. The dividend declared 31st August was 2s. per share for 16 weeks' working.

CHEAP SHARES—SAFE TO BUY—WILL RESUME DIVIDENDS IN 1883.

WHEEL JANE (TIN) MINE,

KEA, CORNWALL.

12,288 SHARES. £2 1s. 8d. PAID. PRICE £1 to £1 2s. 6d. EACH.

NOTE.—Compared with all the tin mines in Cornwall, Wheel Jane shares are the cheapest and best to buy. The mine is now paying current costs, and future prospects are excellent. The whole property is selling for about £12,500.

BUILDINGS, MACHINERY, ENGINES, &c., COST £20,000.

I specially advise the purchase of Wheel Jane shares.

£16,896 HAS BEEN PAID IN DIVIDENDS WHICH WILL BE RESUMED.

They have "six" engines upon this mine—which is most efficiently equipped with machinery for laying open the ore ground in the various levels, &c.

TIN SOLD FOR 4 MONTHS ENDING 1881 REALISED £2811

TIN SOLD FOR 8 MONTHS ENDING AUGUST, 1882 £245

The prospects of Wheel Jane have greatly improved, and their sales of tin will very considerably increase. (Read my Supplement for September.)

A MAP OF THE MINE FORWARDED (Post Free) SHOWING WORKING.

ORGANOS GOLD MINES (LIMITED).

15,000 SHARES OF £1 EACH.

I ADVISED the PURCHASE of ORGANOS SHARES in my JUNE CIRCULAR at 20s. per share for a CERTAIN RISE to £3 or £4. My advice proved correct. Shares were £2 1/4 to £2 1/2 on 5th August last.

ORITA GOLD MINES (LIMITED).

20,000 SHARES OF £1 EACH.

H. GOULD SHARP now STRONGLY RECOMMENDS the IMMEDIATE PURCHASE of ORITA Gold shares at £1 each for a CERTAIN RISE of ONE HUNDRED PER CENT. They may go to £4 or £4 10s., like Organos did.

FERDINAND R. KIRK, STOCKBROKER,

5, BISHOP-LANE, LONDON, E.C.

Fortnightly Accounts opened in all Stock Exchange Securities on receipt of the usual cover.

BANKERS: LONDON AND WESTMINSTER, Lothbury.

ABBOTT AND CO., STOCK AND SHARE BROKERS,

9, CORNHILL, LONDON, E.C.

MR. W. B. COBB, STOCK AND SHARE DEALER,

29, BISHOPSGATE-STREET, LONDON, E.C.

ABBOTT, PAGE, AND CO.,

STOCKBROKERS,

42, POULTRY, LONDON, E.C.

The upward tendency of the Metal Market is causing the price of all good Home Mining Shares to rise rapidly.

WE RECOMMEND, amongst others, for an immediate large rise, the shares of—

EAST WHEEL ROSE.

TREVAUNANCE.

MOUNTS BAY.

OLD SHEPHERDS.

HOME MINES TRUST.

All fully paid.

A., P., and Co.'s Circular will be sent post free on application.

Their last month's recommendations resulted in large profits to their clients. The recommendations in the present Circular will, no doubt, be equally correct.

Business transacted at low commissions in all descriptions of Stock Exchange Securities.

CHEAP OPTION—CHEAP OPTION.

PRINCE OF WALES MINE.—The call of TWENTY or less

number of Shares at 8s., for 2s. per share for a month (till the Contango Day, middle October account). Will shortly have a large rise.

Address, J. MARRIOTT, 50, Holland-street, Clapham-road.

MR. JOHN L. M. FRASER,

GREENFIELDS, WREXHAM.

(Eighteen Years' experience at the Great Miners and other Mines.)

Consulting Mining Engineer

The Gold Amalgamating Company (Limited).

Incorporated under the Companies Acts, 1862 to 1880.

CAPITAL £150,000, IN 150,000 SHARES OF £1 EACH,

Divided into 112,500 Ordinary Shares entitled to a Preferential Dividend of 10 per cent., and 37,500 Deferred Shares, fully paid-up, to be allotted to the Vendors in part payment of the Purchase Money.

FIRST ISSUE OF 77,500 ORDINARY SHARES,

Payable 5s. on application, 10s. on allotment, and the balance as required, subject to two months' notice. In cases where no allotment is made the deposit will be returned in full.

DIRECTORS.

FREDERIC W. BROWNE, Esq. (Messrs. Browne and Wingrove), 30, Wood Street, Cheapside, E.C.
 BERNARD C. MOLLOY, Esq., M.P., Elm Court, Temple, E.C.
 STEWART PIXLEY, Esq., (Messrs. Pixley and Abell), 27, Old Broad Street, E.C.
 THOMAS KYNASTON WEIR, Esq. (Messrs. Henry Bath and Son), Gresham House, E.C.
 *THOMAS ALLISON READWIN, Esq., F.G.S., M.M.S., 8, Bloomsbury Square, W.C.

* This gentleman being interested with the vendors, will not join the board until after allotment.

BANKERS.

LONDON—Messrs. MARTIN and CO., Lombard Street, E.C.
 DUBLIN—BANK OF IRELAND.

SOLICITORS.

Messrs. JOHNSONS, UPTON, BUDD, and ATKEY, 20, Austin Friars, E.C.

BROKERS.

LONDON—Messrs. ROGER MORTIMER, BENTHAM, and HARRINGTON, 2, Royal Exchange Buildings, E.C.
 DUBLIN—Messrs. WM. GEORGE DU BEDAT and SONS, 2 and 3, Foster Place.

AUDITORS.

Messrs. CHANDLER and PIXLEY, 15, Coleman Street, E.C.

SECRETARY (pro tem.)

R. S. ARCHBOLD, Esq.

OFFICES.

DASHWOOD HOUSE, NEW BROAD STREET, E.C.

PROSPECTUS.

The Company has for its objects the purchase and introduction into general use of an improved method of amalgamation (known as "The Readwin Process"), which is a secret mode of treating Quicksilver for amalgamation and an improved Apparatus (known as "The Britten-Readwin Pan"), patented at home and abroad as the "Ore Grinding and Amalgamating Machine," and also the purchase of The Greenwich Ore Reduction Works, situate at East Greenwich.

The results obtained by this process are:—I. The more economical treatment and perfect extraction of the amalgamable gold and silver from auriferous minerals, viz:—

- From minerals containing free gold associated with arsenides, sulphides, tellurides, antimonides, &c.
 - From low grade ores and tailings containing finely divided gold, float-gold, or both in quantities insufficient to pay for working by the ordinary methods.
- II.—The economic concentration, after the extraction of the gold, of the metallic sulphides, &c., thus rendering them marketable, and more valuable.
- III.—Safe-guarding the quicksilver and amalgamated-gold from theft.

In the first case (a), as is well known, the presence of arsenides, &c., frequently acts injuriously on the quicksilver, and causes it to sicken or flout so that much of the amalgamable gold passes away with the sickened or flouted quicksilver, both being entirely lost. These derangements in many cases render the treatment of the ores wholly unprofitable; and, in other cases, even where profits are being realised, the returns are less than they ought to be in consequence of the great loss both of quicksilver and gold.

In case (b) this process applies in a special manner to low grade ores and tailings, of which there are enormous quantities in gold mining districts, and which are at present valueless.

The advantages of the process are:—(1) That a comparatively small quantity of quicksilver is required; (2) that with ordinary care in operation the prepared quicksilver does not sicken or flout through the deleterious influence of arsenides, &c.; (3) that little or no quicksilver is lost; (4) that all the amalgamable gold is obtained.

The value of the grinding and amalgamating machinery consists in its simplicity, cheapness, portability, durability, easiness of erection, and non-liability to get out of order; also in the extreme fineness of the grinding, and the spiral mode of trituration, which compels the float-gold and other finely divided gold to enter into a created vortex of water and to descend rapidly into active contact with the prepared quicksilver, by which it is quickly caught and saved, leaving the finely-ground mineral residues to pass away readily for concentration into a marketable condition.

The machines are designed with automatic feeders, and require only unskilled labour, whilst the amalgamating boxes are made inaccessible to all but the authorised Superintendent.

The peculiar action of the secret preparation in conjunction with the patented apparatus has been open to the inspection and criticism of the public for several months, and samples of auriferous ores from nearly all parts of the world have been submitted to the process with

unvarying success as to the non-derangement of the prepared quicksilver used in the operations.

Of the many trials made at the works at East Greenwich may be mentioned ores from various parts of India, Australia, Ceylon, the Brazils, Chili, the Equador, the United States, Canada, Nova Scotia, Newfoundland, Spain, Portugal, North Wales, Devonshire, Cornwall, Scotland, and Ireland.

The secret mode of preparing the quicksilver (which is in the possession of Mr. Readwin alone) will be entrusted by him to Trustees, two of the Directors of the Company (other than Mr. Readwin), who will personally manufacture and test it by actual trial. Upon their report the Board of Directors will decide definitely whether to complete the purchase.

All money subscribed will remain deposited with the Company's Bankers until the Directors are satisfied as to all points connected with the secret. Should they not be so satisfied, no allotment will be made, and the money will be returned to the subscribers in full.

After the completion of the purchase the secret preparation will be manufactured by the Trustees only at Messrs. Browne and Wingrove's Works, 30, Wood Street, Cheapside, where every provision for secrecy at present exists.

The Directors are of opinion that profits will accrue from the applicability of this process to all ores containing amalgamable gold. The advantages it possesses over other methods arise from the following, viz:—Increased quantity of gold extracted, decreased quantity of quicksilver used, minimum loss of quicksilver, economic treatment of low grade ores for gold, concentration of the valuable metallic sulphides into a marketable condition, and the general economy of the whole operation.

It is proposed to deal with mine owners by way of license, royalties or otherwise, so that this company may participate in the value of the increase of gold obtained, and in rendering valuable many mines that are not now workable at a profit.

The purchase money has been fixed at the sum of £62,500, of which £25,000 will be paid in cash, and the remainder—£37,500, in fully paid-up deferred shares in the company, such deferred shares receiving no dividend until the ordinary shares of the company have in each year received a dividend at the rate of £10 per centum per annum.

The directors have not thought it necessary to have a valuation made of the premises where the experimental works have been carried on at Greenwich, so that the purchase money for the whole has been agreed at the lump sum above mentioned without separation into detailed items.

The enclosed reports of Mr. Lloyd Wise, M.I.M.E., the well-known patent expert and Mr. Edward Field, M.I.C.E., testify to the value of the patent.

The only agreement entered into by the company is dated the 28th day of August, 1882, and made between Edmund Thomas Bruff of the first part, Thomas Allison Readwin and Alexander Hathorn of the second part, Frederic William Browne and Bernard Charles Molloy of the third part, and the company of the fourth part. The

parties of the first and second parts are the vendors, and Edmund Thomas Bruff, who is the promoter of the company, undertakes to defray all the preliminary expenses of the company up to the first allotment of shares. Copies of this agreement, together with the Memorandum and Articles of Association, and also of three agreements entered into by Messrs. Readwin and Hathorn with the Merioneth Mining Agency Company (Limited), under which they contracted to supply the said company with "mercury" treated by the "Readwin Process" as therein mentioned, which agreements will be adopted by this company, can be seen at the offices of the solicitors of the company.

Applications for shares must be made in the enclosed form, accompanied by a deposit of 5s. per share, and remitted to the bankers of the company, or to the secretary at the offices of the company, where prospectus and forms of application can be obtained.

R. S. ARCHBOLD,
 London, 28th August, 1882. Secretary.

7, Whitehall-place, London, S.W., 5th August, 1882.

READWIN'S PATENT.

No. 3653, dated 22nd August, 1881.

This patent relates to an improved ore grinding and amalgamating machine of the kind wherein, by an arm carried round by a vertical spindle suitably driven, a pestle is caused to rotate about its own axis, and to roll obliquely on the inner surface of a circular pan.

The invention is designed to obviate or mitigate defects in machines of the kind as before usually constructed, and comprises features which I believe to be novel, and of considerable practical value in such a machine.

W. LLOYD WISE,
 Assoc. Inst. C.E., M. Inst. M.E., M. Iron and Steel Inst. Assoc. I.N.A.

REPORT ON READWIN'S ENGLISH PATENT.

No. 3653, dated 22nd August, 1881, for Improvements in Ore Grinding and Amalgamating Machinery.

I have examined specification of patents relating to ore crushing and amalgamating machinery, about 200 in number, as far back as the year 1868 inclusive, and have found nothing whatever in my opinion to interfere with the validity of Readwin's patent.

I have also examined his specifications and drawings, and consider that a substantial, commercial, and patentable improvement has been effected in the original Britten machine, which machine, without such improvements would be comparatively useless.

I am further of opinion that the said letters patent granted to Mr. T. A. Readwin are valid, and I may add that I consider that the granting of the American patent goes far to justify this belief, inasmuch as the American law requires searching investigation as to novelty before a patent is granted.

EDWARD FIELD, Assoc. Member L.C.M.
 Chandos-chambers, Adelphi, W.C., 26th July, 1882.

Lectures on Practical Mining in Germany.

CLAUSTHAL MINING SCHOOL NOTES—No. CCI.*

BY J. CLARK JEFFERSON, A.R.S.M., WH. SC.,
Mining Engineer, Wakefield.
(Formerly Student at the Royal Bergakademie, Clausthal.)

[The Author reserves the right of reproduction.]

(b).—SAFETY CATCHES, WITH GRIPPING LEVERS.—The first safety catch invented—Machecourt's—belongs to this class. It was almost immediately succeeded by the more practical design of Fontaine, which was first tried at Anzin in 1851. Above the top frame of the cage is a long cross bar, the ends of which are forked, so as to serve as guides for the top of the cage. A hole is provided in the centre of this bar, through which passes a vertical rod, connected at its upper end to the shackle of the winding rope, having a nut in the centre, and a nut at the lower end. Between the centre nut and the above-mentioned cross-bar is a collar, to the sides of which are hinged the gripping levers, which hang in an inclined position downwards. This collar is secured firmly in position on and to the rod by the above-mentioned nut. The lower ends of the gripping levers are toothed. The cage is suspended from the cross bar above mentioned by flat iron straps, which pass over the cross bar to the sides of the top frame of the cage. A cast-iron plate, vertically below and parallel to the cross bar above mentioned is fixed to the top frame of the cage. This cast-iron plate has a hole in the centre, through which passes the vertical suspension rod, and is forked at the ends, between and in which the gripping levers are free to slide. The under side of the gripping levers rest upon the cast-iron plate where the latter commences to be forked. Between the under side of this cast-iron plate and the nut at the lower end of the suspension rod is a spiral spring enclosed by two short cylinders, one of which can slide over the other. When the rope breaks the spiral spring is free to distend, and brings down the vertical rod with the upper ends of the gripping levers, forcing the lower ends of the latter against the conductors. The cage, however, continues to fall through the small space which separates the collar from the first-mentioned cross bar, to which the cage is attached. The shock acts advantageously, in so far that it drives the gripping levers more firmly into the conductors. Fontaine's safety catch weighs from 3½ cwt. to 5½ cwt., according to the weight of the cage.

The great disadvantage of Fontaine's safety catch lies in the fact that, owing to the gripping levers being connected directly with the vertical bar moved by the spring, these were moved outwards whenever the tension of the winding rope fell below the weight of the cage, and caused the stoppage of the cage when no actual rupture of the winding rope occurred. To remedy this defect M. Vilain altered the construction at Anzin, and hinged the gripping levers direct to the top cross bar, and inserted two auxiliary levers between these and the spring in such a manner that the gripping levers were not moved until the spring had expanded by three-eighths of its own length. This arrangement allows of the gripping levers being acted upon by the miners in the cage independent of the action of the spring—a somewhat doubtful advantage.

BORGSMULLER'S SAFETY CATCH.—The gripping levers are hinged about their centres on bolts passing through a bar forked at the ends, and which is fixed across the centre of the upper frame of the cage, being firmly attached at the ends to the frame of the cage. The upper ends of the gripping levers are attached by short coupling chains to the shackle of the winding rope. The top ends of the gripping levers are also pressed inwards and downwards by S-springs fixed to the top frame of the cage. A third short coupling chain is attached at one end to the shackle of the winding rope, and at the lower end to the above-mentioned bar, or rather to a bolt passing through the bar, having a nut on the underside of the latter. The length of this third coupling chain is such that when it is pulled tight by the winding rope the lower ends of the gripping levers hang free from the conductors, the upper ends of the levers forcing back the springs. When the rope breaks the springs force the upper ends of the gripping levers inwards and the lower ends outwards against the conductors.

The following modification of Fontaine's safety catch is employed at the Pribram Mines. The vertical suspension rod, the upper end of which is attached to the shackle of the winding rope, slides freely through the centre of the cross beam in the top frame of the cage, being provided with a nut and washer on the under side of the beam, these taking the weight of the cage. A cross plate is passed over the lower end of the vertical suspension rod, and can be firmly fixed to the latter by a couple of nuts and a locking nut. The position of the cross plate (which determines the amount of compression of the springs) can be adjusted by these nuts. Two vertical rods provided with nut and check nut at their lower ends pass through the ends of the cross plate, and through the cross beam of the cage. Two buffer springs surround these rods between the cross plate and the cross beam, and tend to force the cross plate and the three vertical rods downwards. The upper ends of the two side vertical rods are attached by a pin to the ends of the two gripping levers. The holes for the pin in the upper end of the side vertical rods are circular; those in the ends of the gripping levers are slot holes. The gripping levers are hinged in their centres to forked joints, the round shafts of which pass through the cross beam of the cage, and have a nut on their lower ends to fix them to the beam. The gripping ends of the levers are serrated. In normal position the gripping levers are inclined with the gripping ends downwards. When the rope breaks the springs distend, forcing the cross plate, side vertical rods, and upper ends of the gripping levers upwards and outwards, causing them to dig into the conductors. The advantage in having a separate spring for each gripping lever lies in the fact that when one spring only is employed and the cage is not exactly in the centre between the two conductors the gripping lever on the side nearest a conductor catches first, and the cage is supported alone by the gripping lever in question, since the locking of one lever is sufficient to prevent the further distension of the spring. When each gripping lever is provided with a separate spring the locking of one lever does not prevent the spring of the opposite lever from forcing this latter against the conductor, and the entire shock does not fall on one side of the cage.

In the following arrangement used at the Scharley Colliery, in Upper Silesia, the gripper is arranged to tighten on two opposite sides of the conductor. The gripping lever is hinged about its centre, the support for the pin on which the lever oscillates being fixed to the top frame of the cage. One end of the lever is attached by a short chain to the shackle of the winding rope, and is also pressed downwards by a spring. The opposite end of the lever has two side vertical projections, which embrace the conductor. In its normal position the lever is horizontal, and the side projections vertical. When the rope breaks the spring presses one end of the lever downwards and the gripping end upwards. In this position the side projections are not vertical, and to tend to kink or clamp on the conductor, locking the cage to the latter. The advantage of this mode of gripping the conductors has been mentioned. We shall meet with a similar arrangement in the case of safety catches for wire rope conductors.

(c).—SAFETY CATCHES WITH WEDGES.—The great disadvantage of safety cages with gripping levers lies in the fact that the levers in cases where they catch, split, or injure the conductors so much, that the part of the conductors on which the levers have caught must be renewed. Simmersbach proposes, therefore, in place of the gripping teeth to use a wedge shaped projection at the end of the levers in the safety arrangements described under class b. The wedge catches between the guide plates and the inner faces of the conductors. This arrangement still has the disadvantage that the conductors are pushed outward and subjected to a breaking strain. To remedy this defect Lemaire proposes to make the ends of the levers forked, so as to embrace the conductors, and on the inner sides of the fork to attach two wedge shaped pieces of wood. The forked or wedge lever would thus grip each conductor on two opposite sides.

* Being Notes on a Course of Lectures on Mining, delivered by Herr Berggrat Dr. von GODECK, Director of the Royal Bergakademie, Clausthal, the Harz, North Germany.

DELSAUX SAFETY CATCH.—To the upper frame of the cage and supported on three wooden bearers a cross beam of wood is firmly fixed in the centre of the cage, and running across from one conductor to the other. The ends of this beam or bar are cut inclined, and against the ends the inclined sides of a couple of wedges can slide. The vertical outer side of the wedges are covered by iron plates with roughened or toothed surfaces. The wedges are supported from the ends of levers (pivoted on their centres) by short connecting links. The opposite inner end of the levers are connected by short links to a vertical suspension rod attached at the upper end to the shackle of the winding rope. The lower end of the suspension rod passes through the cross beam and the centre bearer, and is attached below these to the centre of a bow spring, which tends to press the vertical rod and inner ends of the levers downwards, raising, when the rope breaks, the outer ends, and with them the wedges which catch between the ends of the cross beam and the conductors, and which are prevented from sliding downwards by the toothed or serrated covering plate. In a better designed arrangement by Deliaux, two side wedges are employed in place of each of the wedges above described, lessening the liability of the conductors being broken when the rope breaks and the catch comes into play. The weight of the safety catch arrangement is about 1-12th that of the loaded cage.

At the Dechen Pit of the Heinitz Colliery, near Saarbrücken, the following safety catch arrangement has been applied by Kinno. A box girder forms the cross-piece in the centre of the top frame of the cage. To the ends of the girder guide plates are attached to glide along the conductors, and in each of these plates a dovetailed groove is formed in which the wedges slide. The lower ends of the guides are provided with studs or pins, which are screwed at the ends, on which a nut and washer are placed. The studs or pins pass through oval holes in a short connecting piece. The lower end of the cross-piece is connected by a hinged joint with one end of a lever, the fulcrum of which is carried down from the above mentioned girder. The opposite inner ends of the levers are joined to a common plate through which passes the vertical suspension rod, the upper end of the latter being attached to the shackle on the winding rope, and the lower end having a nut and washer to support the plate. To this plate is attached a short cylinder through which the vertical suspension rod passes, and which can slide telescopically within a second cylinder attached to the girder. Surrounding these two cylinders and between the plate and the girder is a spiral spring which, when the cage is suspended, is compressed to the extent allowed when the inner cylinder is pushed home. In this position the inner ends of the levers are raised and the outer ends with the wedges are drawn downwards to such an extent as to leave sufficient play between the outside of the wedges and the inner faces of the conductors. When the rope breaks the spring distends, pushing down the inner and raising the outer ends of the levers with the wedges, the latter fitting tight between the girder and the conductors, locking the cage fast to the conductors. The oval holes in the cross-piece for the pins or studs of the wedges are oval to allow of the wedges moving in or out towards or from the conductors, since the outer sides of the wedges must be vertical to be parallel to the conductors. The above mentioned dovetailed groove is inclined.

In the following arrangement two wedges are provided for each conductor, and which grip the latter on two opposite sides. The wedges are placed close beneath the bottom of the cage. The vertical sides of the wedges are provided with a few pointed pins, which are forced by the weight of the cage into the conductors before the alling cage tends to draw down the wedges. These pins may be regarded as disadvantageous, inasmuch as they are liable to cause the wedges to catch owing to the oscillation of the cage (unless the pins are arranged as in Davie's safety catch, being held back from projecting beyond the straight vertical portion of the wedges by a spring until the actual breakage of the rope occurs, when the spring is compressed, and the inside inclined plate carrying the pin forced outwards, projecting the pin through a corresponding hole in the plate forming the outside of the wedge.) Each wedge is carried by a vertical rod, the upper ends of two adjoining rods being attached to the end of a lever centred on a support fixed to the upper frame of the cage. The opposite end of the lever carries a balance weight, and has attached to it a short chain, which connects it with the shackle of the winding rope. The cage is, however, mainly carried from the winding rope by coupling chains attached to each corner of the top frame. A flat spring is arranged to press down the inner ends of the levers, which come into action when the rope breaks, raising the wedges, and locking the cage fast to the conductors.

TECHNICAL EDUCATION IN INDIA.—It is almost exactly a quarter of a century since the Universities of Calcutta, Bombay, and Madras were founded, and to judge from the Calcutta University Calendar for 1882-83 (Calcutta: Thacker, Spink, and Co.), just issued, the instruction given is of a thoroughly sound and practical character, and the value of it is fully appreciated by our Indian fellow-subjects. The Calendar is quite as large as that of the University of London, and the Calcutta University is able to claim a larger number of graduates—about 5000—and probably as many undergraduates—over 4000—although the examinations appear to be quite as severe—the entrance examination alone being somewhat lower. The great success of the Calcutta University, and the comparative failure of London University, may probably be accounted for by the fact that the former is not a mere paper university, regular study at one of the affiliated colleges or institutions being essential to a degree, the only exception being for those *bona fide* engaged in teaching during the time which may elapse to give them the standing necessary to entitle them to be examined. The same regulations as to the examinations have to be complied with by all. The fee of 30 rupees for the B.A. is forfeited if the candidate fail to pass, and he cannot present himself again, even on payment of another 30 rupees, without a certificate that he has studied another six months in an affiliated institution. For the Bachelor in Law the fee is 30 rupees, forfeited on failure, and the B.L. cannot proceed to the Doctor in Law without passing the honour examination (fee 100 rupees, forfeited on failure) and satisfying the syndicate, by testimony of two Doctors in Law, that since graduating he has practised his profession with repute for five years, and that in habits and character he is fit for the honour; he must also produce an approved essay on some subject connected with Law or Jurisprudence. The regulations of the medical faculty are fully as strict as in any university under the British Crown. Turning to civil engineering, the rank of Licentiate is only obtainable by undergraduates who have prosecuted a regular course of study in a school of engineering recognised by the Syndicate for three academic years after passing the entrance examination. The First Examination in Arts must be passed before that for the degree of B.C.E. can be undertaken, and the degree of M.C.E. necessitates the passing of the honour examination, the testimony of two M.C.E.s. that the candidate has practised his profession with repute for four years after graduating, and an essay on an engineering subject. The University has 67 affiliated colleges and institutions which the students can attend at the very moderate cost of one rupee upward per month, many having a large and almost exclusively Indian professional staff with several pandits and baboos upon it. The University appears to be making admirable and continuous progress, and is doing much to increase the good feeling between Indians and Englishmen.

LETTS'S POPULAR ATLAS.—Favourable reference to this really excellent Atlas has several times been made in the *Mining Journal*, and each successive part published affords additional justification for the good opinion expressed. The ten-sheet map of the United States, which is being issued in the current numbers, would alone be worth the cost of the entire Atlas, and will show not only the States and counties, but the rivers, railways, canals, roads, swamps, bridges, &c., and thus be of equal value to the traveller and student. There is a useful table, giving the value of the principal articles imported from the United States to the British Isles, and details of commercial and general interest. The map of the Asiatic Archipelago affords an abundance of valuable information. The minuteness of the details given may be judged of from the fact that in the map of the City of Philadelphia even the tramway lines are shown and distinguished from each other. Russia in Asia, Polynesia, the Eastern United States,

and a good star map are contained in Part 31, and in the following part are continuations of the same maps, and the Patagonian portion of South America. The workmanship of the maps could scarcely be improved, and the selection and arrangement will ensure them general appreciation.

CASSELL'S PUBLICATIONS.—Science for All, part 58, contains the conclusion of the article How Molecules are Measured; and articles on Breath and Breathing, by Dr. Andrew Wilson; on a Coal Field, by Frederic Drew; on How a Fish Swims, by Dr. Hans Gadow; on Fire-Damp and the Safety-Lamp, by Prof. Ira Remsen, of Johns Hopkins University, Baltimore; and on the Old Life of Europe, by Prof. P. M. Duncan, F.R.S. Farrar's Life and Work of St. Paul, part 8, includes the chapters on Judaism and Heathenism, on Paul's first missionary journey; and the commencement of that on his movements in Pisidia. Knight's Dictionary of Mechanics extends from Signal to Slide Rail, and includes an interesting article on Silver Mining.

Meetings of Public Companies.

AFRICAN GOLD COAST SYNDICATE.

The statutory meeting of shareholders was held at the Cannon-street Hotel, on Thursday, Capt. REVETT (one of the directors whose names appear in the prospectus) took the chair.

Commander CAMERON said he objected to Capt. Revett taking the chair, and moved that Mr. Foster (of the firm of Foster, Hight, and Co.) should take the chair.—Mr. GRANT seconded the motion.

Capt. REVETT said that Mr. Grant was not a registered shareholder. Mr. FOSTER said the Act provided that the Chairman of the board should take the chair, but there was no chairman, and therefore it was for the meeting to select a chairman.

Capt. REVETT: I am the Chairman; but really, gentlemen, would it not be better to appoint three gentlemen to investigate the affairs of the company. A show of hands was then taken, when the proposal that Mr. Foster should take the chair was carried.

Capt. Revett vacated the chair, but protested against the proceedings, and said that three of the gentlemen in the room who had voted were not shareholders.

Mr. FOSTER then took the chair, and said he would take a note of any objection which Capt. Revett might make.

Dr. THOMPSON asked what was the cause of all this difference of opinion?

Capt. REVETT said he would explain what it was. There was a difference of opinion about making a payment to Messrs. Foster, Hight, and Co., who made a demand for 700l., which he and Mr. Glynn objected to, considering that it was not a just claim. That was a matter which he wished to bring before the shareholders for the purpose of asking their opinion as to whether the money should be paid. There was also a difference of opinion with regard to Capt. Burton, who, when the shares were allotted almost immediately brought out another Gold Coast company. He did not say that Capt. Burton had no right to do this, but it certainly tended to check the subscriptions to the African Gold Coast Syndicate. Then he considered that the books had not been kept in the way they should have been. Looking at the large amount paid for promotion money, he considered that sum included everything, and that they had no right to make a further demand for 700l.

The CHAIRMAN said that not one of the directors held a share in the company. Capt. REVETT said that this was not true.

The CHAIRMAN went on to say that if Capt. Revett took the chair the proceedings would, under these circumstances, be null and void. He believed Capt. Revett paid 5l. for two shares, but he was not on the register. The dispute regarding the 700l. was between the company and their advertising agent. This was a statutory meeting of shareholders, at which the whole of the directors resigned, and it remained with the shareholders to elect new directors. His firm formed the company for Mr. Irving, and received a certain remuneration. He could only hope that the shareholders would, to-day, elect as directors gentlemen who had a *bona fide* interest in the company. As a large shareholder himself he was determined to have on the board business men, and men who had experience on the Gold Coast. He was glad they had secured the services of Commander Cameron.

A SHAREHOLDER asked whether the 10,000l. paid to Messrs. Foster, Hight, and Co. was mentioned in the prospectus?—Mr. FOSTER said the promotion money was not paid by the company but by the vendor. His firm made an arrangement with the vendor to take one-fourth of the fully paid-up shares in payment for their services, and as the subscriptions were 40,000l. the proportion was 10,000l. The matter was set forth at the time.

Capt. REVETT said the directors allotted on the condition that the 10,000l. paid for everything, and therefore they objected to the payment of 700l.

Commander CAMERON went into some details showing the points on which he differed from Capt. Revett and Mr. Glynn in connection with the general management. As regarded the property itself he believed it was a valuable property provided it was properly managed.

Mr. GLYNN (director) also corroborated the statement of Capt. Revett that Foster, Hight, and Co. undertook to receive a certain amount for promotion money, and therefore he objected to the 700l. which it was sought to make the company pay. He and Capt. Revett had done the best they could to save the money of the shareholders. A report of the directors had been prepared, and should have been sent out, but it never had been sent out, and therefore the shareholders had not been made acquainted, as they ought to have been, with the state of the company's affairs.

A long discussion ensued, and several shareholders expressed the opinion that there were matters which certainly required investigation, and Dr. JARVIS moved, and Mr. WOOD seconded, that a committee be appointed, and that the meeting be adjourned for a fortnight.

On the other hand, Mr. CROSS moved, and Mr. JONES seconded, an amendment, to the effect that directors be appointed.

Capt. REVETT strongly protested, and called upon the Chairman not to put the amendment.—The CHAIRMAN put the amendment, and declared it carried.

This raised a strong protest, several shareholders declaring that only three or four hands were held up for the amendment and eight or 10 against it.

The Chairman then left the room, accompanied by three or four shareholders. Capt. REVETT was then voted on to the chair, and he was determined that there should be a thorough investigation in the interests of the shareholders. A small committee was then appointed to investigate the affairs of the company, and the meeting broke up.

MORFA DU MINING COMPANY.

An extraordinary general meeting of shareholders was held at the offices of the company, Finsbury-circus, on Tuesday (Mr. J. Y. WATSON, F.G.S., in the chair), to consider, and if deemed desirable, to pass a resolution relative to the increase of capital.

Mr. FELIX F. WILSON (the secretary) read the notice calling the meeting. The report of the directors was as follows:—

In our last report we advocated the issue of the 2383 unallotted shares at par, and as their issue was approved of by the shareholders at the meeting on May 19, we invited subscriptions for them, but we are sorry to say that too few applicants responded to justify our proceeding to an allotment. We submit with this a report upon the mine by Capt. Mitchell, from which it will be seen that our chances of opening up a good deposit of copper ore seem better than at any previous time; and as it would take only a small addition to our returns of bluestone to enable us to work to a profit, we think it extremely desirable to at least prove the ground at the 36, near Id shaft. The importance of this second ground is clearly shown by Capt. Mitchell's report; and as the 36 has been driven to within about 8 fms. of the ore-ground, the cost of proving it will be very small. To supply funds necessary for this work, we recommend that power be taken to issue the 2383 shares at a discount of 10s. each, and this meeting has been called to authorise the said issue. In the meantime we have been obliged to stop the expenses at the mine as our funds are exhausted. The financial position of the company is briefly as follows:—Liabilities incurred 547l., and assets, consisting of copper ore and bluestone in stock in course of realisation, about the same amount, but there is a temporary lull in the demand for the latter, which renders it very desirable not to press its sale just now.

The following report from the agent, Capt. T. Mitchell, was also submitted:—

Aug. 15.—In handing you my report of this mine, I beg to furnish you with particulars as to the value and prospects of the various points when last in operation:—The lode in the 60 fm. level, which is the bottom of the mine, is from 3 to 4 ft. wide, worth 5 tons of bluestone ore per fathom. There has been but very little lode stoped away from the back of this level, and there is a good lode of bluestone standing untouched in the bottom. The stopes in the back of the 48 have very much improved lately, and the lode here is worth 3 tons of bluestone per fathom, besides a little copper ore. At the 38, just over this place, there is also a lode worth 3 tons of bluestone per fathom, which has been opened 6 fms. in length. The 36, south of engine-shaft, has been driven within about 8 fms. of the run of ore-ground recently cut at the 20, and intermediate levels near Id shaft, and is a point of considerable importance; should the lode be cut productive at this level, which there is every reason to believe it will, it would open up a valuable piece of ground, and the 48 and 60 could also be extended to come under the same run of ore-ground. The lode in the mine below the intermediate level, near Id shaft, is worth 4 tons of copper ore and 3 tons of bluestone per fathom; a fine looking lode. The last 2 fms. sunk yielded 8 tons of copper ore and 6 tons of bluestone. This winze will come down about 8 fms. before the present 36 end, which is quite in new ground. The copper is getting very much stronger and richer in going down, and from the favourable appearance of the ground and the character of the lode about this place, there is every probability of meeting with valuable deposits of copper ore in addition to the bluestone. This new run of ore-bearing ground is dipping slightly to the deeper levels, so that the distance will be less to drive to reach it in the deeper levels. I would remark that this part of the mine has not been explored to any great extent, and the chances are that if more ground was opened up in this direction, valuable deposits of both copper ore and bluestone would be discovered, and with the reserves of ore-ground already laid open, the mine would soon be in a position to make profits.—T. MITCHELL.

On the motion of the CHAIRMAN, seconded by Mr. PAGE, the following resolution was passed:—"That it being essential, in the interests of the company, that a certain amount of working capital be forthwith raised in cash, the directors are hereby expressly authorised to issue all or any of the 2383 shares now unallotted, at such

a discount not exceeding a discount of 50 per cent., or 10s. a share, as they shall determine."

The CHAIRMAN having stated that the agent had intimated his willingness to take more than his proportion of the shares, but that the general body of shareholders had not responded to the circular, the directors were requested to state to each shareholder, when calling the confirmatory meeting, what his proportion of the unissued shares is, and inform them plainly that unless the shares are taken up there will be no alternative but liquidation. It was stated that 1000Z. would suffice to explore the bunch of copper ore lately discovered.—The meeting then terminated.

WHEAL GRENVILLE MINING COMPANY.

A general meeting of shareholders was held at the offices, Union-court, Old Broad-street, on Thursday.—Mr. R. W. GOULD in the chair. Mr. D. JULYAN (the secretary) read the notice convening the meeting, and the statement of accounts and the agents' report were taken as read.

The CHAIRMAN said that the last time they met they had to report that the average produce of their tinstuff in the previous quarter was some 5Z. below the previous average. Tin had a downward tendency for some three or four months, and he regretted to say that the average price obtained for their tinstuff during the past 16 weeks had only been 59Z. 19s., as against 65Z. 10s. in the previous quarter. Of course, a 10Z. drop in the price of tin in the course of six or eight months meant a very considerable difference in the figures of Wheal Grenville, which was returning something like 400 tons of tin a year. However, he was very happy indeed in being able to say that notwithstanding all, that Wheal Grenville had maintained its position amongst the first mines in Cornwall. There were only two or three mines at the outside who had done anything like as well. During the 16 weeks about the same average quantity of tin had been sold as previously. This had not come up to his expectation, as he hoped to get 40 tons by this time. They had to deal with large quantities of tin, and their stamping apparatus was not sufficient to do much more than they were doing at present: 120 tons had been returned for the past six weeks, 71Z. 6s. 1d. had been received for it, being an average return of 158Z. 19s., against 65Z. 10s. in the previous quarter. On the other side of the account their labour costs had been 3394Z. 1s. 4d., being at the rate of 28Z. 6s. 6d. per ton of tin returned. That was rather in excess of the previous quarter, because in the last quarter they were taking the shaft below the 190, and all the extra materials and labour were brought into the account, and, consequently, the items of the past 16 weeks had had to bear more charges. However, the difference was not very great. The cost amounted to about 48Z. 4s. 4d. per ton of tin returned, and as he said before he did not think that there were more than two mines in the county which were returning their tin at anything like that price. The lords' dues amounted to 217Z., and the moiety of tenants' rent was 38Z. 1s., and it was the first time that item had ever been in their accounts in that shape. It arose on account of their destroying surface land. They were under an agreement to pay the landlord on all surface land destroyed, 100Z. for the best, and 50Z. for the worst. He had ascertained that it was not an unusual thing for mines to have to pay rents of that kind, even after they had bought the land, and, therefore, they did not raise any difficulty in regard to the matter. It must not be forgotten that they were under a lease, as they were paying 1-30th instead of 1-18th, the other charges amounted to a mere trifle, and the result of all was that the sum of 1872Z. 2s. 2d. was the amount appearing to the credit of the mines in the last sixteen weeks. They must not overlook the fact that that 1872Z. had not been earned during the sixteen weeks, it was not all profit, and that must be borne in mind when they came to consider the question of the dividend. It must not be lost sight of that some 350Z. or 400Z. had been brought into the accounts from the sale of old materials, and that amount was left over from the last time. He thought it would be a nice thing to keep that amount in hand in order to commence a fund for the working of the eastern portion of their property. They would remember that Wheal Grenville when they came into office had an old set and a new set called the East Grenville, and it was necessary to have funds in order to develop the latter property. Before long they would probably have to encounter the question of water on the East Grenville set, and whether they were able to pump the water or not they could not tell, but the fact that the haulage would be one question they would have to take into serious consideration. The 450Z. would form a nest egg with which to begin the fund for working East Grenville. He should be sorry to touch upon it unless he could see some way of replacing it. If tin were to go to the price it was two years ago, and they could get 70Z. a ton, there would be no difficulty in keeping up fair dividends and providing a fund for developing the East Grenville as well. He had given a good deal of consideration to all the questions affecting the price of tin, and his own impression was that they would see a much better price for tin between now and the end of the year. With regard to the mine itself they had reserves which would keep them going for many years, even if they stopped all kind of development, and he did not think that such a thing could be said of any mine in Cornwall. The number of men employed had been about the same as before, and, in fact, Wheal Grenville had been going on just the same as before. Of course their profits in the next three months must depend on the price of tin, and he thought they might venture to hope for a rather better average during the next three months. He moved that the statement of accounts presented to the meeting, together with the agents' report, be received, approved, and adopted.

Mr. BULLOCK seconded the motion which was put and carried. A dividend of 5s. per share was declared after an amendment that it should be 4s. per share had been put and lost. A vote of thanks to the Chairman and directors then terminated the proceedings.

THE NEW HOLMBUSH MINING COMPANY.

The ordinary general meeting of shareholders was held at the New Exchange Buildings, George Yard, Lombard-street, yesterday, Mr. DAVID SYKES in the chair.

Mr. GEORGE BUTLER (the secretary) read the notice convening the meeting, and the report of the directors was taken as read.

The CHAIRMAN said he would not commit the mistake they made on a former occasion of saying there was not much to be said, because he thought on the present occasion there was a great deal he could say in favour of their present position. They had, as the report of the captain of the mine stated 140 men, all told, employed at the mine, so that they would observe it was not what they might call a small affair at all; 117 of those were miners employed under surface, shaftmen, and miners, and they had nine engine-men, and 15 others employed at surface on the last occasion. As they were aware they were exceedingly anxious that they should get as hurriedly forward as they could with their works at the Redmoor in order that they should be able to get into the lower levels at Holmbush, and although they had urged on as much human nature could do the completion of this work, they had not yet attained to the starting of the pumping engine at Redmoor; the starting of the pumping engine would enable them to change their pitwork at Holmbush, and thereby drop the pitwork gradually till they got to the bottom of the shaft. They had lost a lot of pumps through the breaking of a wire-rope, in consequence of the tension being too much for it, but they hoped to find them at the bottom of the mine. That had impeded their work in getting to the 132. They had, however, now dropped their pumps to a level below the 132, so that the engine had nothing to do now but to go on pumping up the water till they got there when they hoped to be able to get into that level, and then get to the silver-lead lode as rapidly as possible. At the present moment he confessed he was somewhat disappointed with the result of the driving in the 70 into Kit Hill where they hoped to have met with the junction of the kiltas. However, the only thing they could do was to go on driving; no doubt they would meet with the junction where all mining authorities agreed they must find a considerable quantity of metal; but whether it would be tin or copper none could say. They were also driving the 70 west with drills as far as possible in order to get to the cross-course where the former workers found in the levels above and below a considerable quantity of copper ore against the cross-course. He thought that if it had been found above and below it might be anticipated it would be found between the two where they were now driving. In the 100, 110, and 120 they were working on the Flapjack lode, where they had copper and munda, and he thought that would show that they had every encouragement to find very much more copper in the lower levels as they descended than they had in the upper levels. They had made a few sales of copper ore of about 200Z. each and hoped to be able to continue these sales monthly. With regard to the lead lode 120 was the first level they cleared and got into, and when into the 132 they would have a very large quantity of stuff to send to surface. They were getting machinery in order to treat the lead lode in the cheapest and most expeditious manner possible. Arrangements had been made for the erection of an engine to crush and treat the ore when they had found some very good results of silver-lead ore. The general principle adopted in Cornwall was for the men to go down the mines by means of ladders, but the directors had determined that their men should go down by a skip and wire-rope, and be brought up in the same way. It was estimated that the saving of time which would thus be effected would give them a return of 20 per cent. more from the mine. He might say personally he started this mine principally to realise what was called a dead asset of the credit company. He put 800Z. of his own money into it, and all he could say was that he was perfectly satisfied with the prospects of the mine at the present time. Referring to the debentures he said that as prudent men they did not like to issue the whole of their share capital, but preferred to have something to sustain their credit. If they were not satisfied with the mine at a price he would take it off their hands and work it himself. In conclusion, the Chairman moved the adoption of the report and accounts.—Mr. W. LUNDIE seconded the motion.

Capt. BENNETT, in reply to questions, said that since he had been in the mine he had sent away about 30,000 tons of munda. There was a saying in Cornwall that munda rides a good horse, and no doubt they had very valuable copper deposits underneath. This mine was started in order to reach the bottom where there was known to be a very rich course of copper ore, and the Chairman had explained the reason why they had not been there. They were now about 45 fms. from the bottom of the mine, and to get there would cost about 1800Z. Mr. MAY contended that it would be necessary to have more capital, and argued that it would be better to issue the shares than the debentures. He proposed a resolution authorising the directors to issue the unallotted shares either at a premium or a discount.—Mr. BLAYDON seconded the motion. He said he was very pleased to hear the Chairman remark of the mine that he was very confident of success, but he did not believe that that success could be attained without money. He would take more shares or do anything he could to strengthen the hands of the board. If the mine was worth anything it did not matter whether they had to pay on a capital of 40,000Z., or 25,000Z. After some further discussion the report was adopted.

Messrs. Cooper and Co. were re-elected auditors, and the motion proposed by Mr. May was then put to the meeting and carried.

NEW REDMOOR MINING COMPANY.

The second ordinary general meeting of this company was held at the New Exchange Buildings, George Yard, Lombard-street, yesterday, Mr. DAVID SYKES in the chair.

Mr. GEORGE BUTLER (the secretary) read the notice convening the meeting, and the report of the directors was taken as read.

The CHAIRMAN said he presumed the reason why there were not many shareholders present was because they were really in such a preliminary state with regard to this mine that they had not yet got to make any returns of a practical nature. He might say that they had saved a very considerable sum of money by the purchase of secondhand machinery, which by some little improvement and repair they had made quite able to new; and in regard to the engine and boiler alone they had saved something like 1500Z. to 1700Z. He might state generally that the pumping-engine they hoped to start in about a fortnight from now. A whim-engine he supposed they started in May last, when they invited the shareholders to view the property, and since that time they had been clearing the shaft of debris, so as to put down necessary pitwork for drawing the water. They could not begin the pumping till they had the pitwork, but then they hoped to clear the mine to the bottom. Meanwhile they had been industriously paying attention to some of the levels, particularly the 40 and 80 fms. They had had men for a considerable time in the 40 stopping the lode, which contains arsenical munda, copper, and tin, but more especially tin. In the 80, since they had got down there they were happy to say the lode had improved, and he felt confident that their expectations that the deeper they went the richer the lode would prove would be verified. In the former working no attention, or very little attention was paid to the working of the east and west lodes; or he might say of the tin, copper, and arsenical munda lodes, preferring as they did at the time to work the lead lode, and in order that they might form some opinion as to the value of the lead lode he thought the best thing he could state was this: they found the lead lode had been taken away to the bottom. If it had not been valuable they would not have taken it away. Their desire, however, was to get to the bottom of Redmoor. He had no doubt that they should find the lead lode equally profitable to what it was above the 100 fm. level. As regarded the arsenical munda, they did not expect that that was of the same quality that it was at Holmbush, but they were preparing the necessary appliances for treating it. Of course some expense would have to be gone to. They were prepared to issue their circular and applications for debentures in a similar way to what they had done at Holmbush, and the result of the application he hoped would be eminently satisfactory, and then they would cut their coat according to their cloth, and purchase such machinery as they thought would be necessary. He would say in this mine more than he said in the other that he thought they had one of the finest properties, and for this reason, that they had a lead lode which had been most valuable down to the 125—most valuable because the original miners thought it worth their while to take it all away. So satisfied was he in the future of the mine that he held 750 shares, or about 1-10th of the mine. He could not show his confidence in the mine better than by telling them that, and he thought that if shareholders consulted their own interests they would take care that this thing did not slip through their fingers. He moved the adoption of the report.

Mr. LOWE seconded the motion, and said that he had visited the mine and was most satisfied with all he had seen at surface. He believed that it was only necessary to have some more capital to make the mine a most prosperous property.

Captain BENNETT added that he felt more confidence than he ever did in the mine, and what was unusual in mines which had been standing idle for a time there were thousands of tons of stuff which could be taken away at a very good profit.

Mr. HIRSH said he was perfectly satisfied with the substantial character of the machinery, which he believed to be in every way capable of doing the work. Mr. RENDLE, who said he had visited the mine, remarked that they had an unusual supply of tin, lead, copper, and arsenic.

The CHAIRMAN having stated that several of the miners were shareholders in the company, the motion for the adoption of the report was put and carried unanimously.

Messrs. Cooper, Wintle and Co. were re-elected auditors, and a vote of thanks to the Chairman and directors then terminated the proceedings.

PHOENIX AND WEST PHOENIX UNITED MINES.

A four-monthly meeting of shareholders was held at the mines, on Aug. 31. Mr. PILKINGHORNE (pursuer) in the chair.

The following report was submitted by the committee:—

On May 11, being sixteen weeks since we held our last shareholders' meeting, after then declaring a dividend of 1200Z., a balance was left in hand of 63Z. 1s. Since then tin and copper have been sold realising 10,528Z. 10s. 11d.; add for sundry sums received, 59Z. 10s. 2d.; making a total amount of credits of 10,651Z. 2s. 1d. The expenditure for the said sixteen weeks has amounted to 9354Z. 8s. 5d., leaving a balance to the credit of the company of 1296Z. 13s. 6d. We propose writing off a further sum towards slimes dressing plant 50Z. This will leave a balance for the shareholders to appropriate for a dividend, if they think proper of 1246Z. 13s. 6d. The amount standing to the debit of slimes dressing plant and boring machinery is reduced to 640Z. The report of the agents shows that the mines continue very productive, and your committee on further development confidently anticipate improving dividends. It is gratifying to learn that your extensive machinery continues in good working order. All sums charged in the accounts audited on May 11 last (the date of the last shareholders' meeting) are paid. Your committee recommend that subscriptions should be made to the following institutions:—The South Devon and East Cornwall Hospital, 3Z. 3s.; the Plymouth Eye Infirmary, 1Z. 1s. In their detailed report on the working and value of the several parts of the mines the agents reported that in a stop at the bottom of the 70 fm. level of Stowe's shaft, Western Mine, the lode was 12 feet wide, and worth 80Z. per cubic fathom. Of the numerous other lodes in various parts of the mines several reached to the value of 20Z. per cubic fathom, and some to 25Z. and 30Z. At different levels of Stowe's shaft there are 12 tribute pipes, varying from 5Z. to 13s. 4d. in 1Z. for tin and copper. The agents conclude their report by congratulating the shareholders on the present aspect of their property in these mines, and they express their confidence that the returns for the next 16 weeks will be as good and favourable as the present.

The committee's report and the statement of accounts were adopted. Mr. C. ABBOTT moved that the sum of 1200Z. be appropriated to the payment of a dividend of 2s. per share, which was carried. The CHAIRMAN informed a shareholder that the tin returns averaged 45 tons per month.—Mr. MATTHEWS seconded Mr. Abbott's proposition for the declaration of a dividend of 2s. per share.—The motion was carried.

On the motion of Mr. C. ISAAC, seconded by Mr. W. BAYDEN, the Rev. J. West, Dr. Pearce, and Messrs. W. Polkinghorne, C. Abbott, W. West, J. Beaglehole, W. Matthews, and A. C. L. Glubb were re-elected to be the committee for the next sixteen weeks.

Mr. POLKINGHORNE, referring to the satisfactory character of the proceedings at that meeting, expressed himself much gratified that their mines there were not only giving such good returns now, but certain, he believed, to show even still more favourable results in the near future. (Applause.)—Capt. TRUSCOTT had also a high opinion of the mines.

Capt. PRISK considered their mines an excellent and improving property, and he believed they would compare favourably with any property of the kind in the county. (Applause.) They had found an uncommonly rich lode in the western workings, and the prospect of the near extension of lodes of this richness was a proof of the fertility of the mines he would simply tell them that notwithstanding the great quantities of tin extracted from the mines there was not the slightest trace of approaching exhaustion. (Applause.) In fact, so little impoverished was the mine that one could hardly notice that any metal has been taken away. The greatest prosperity of the mine he was confident was yet to come. (Applause.)

Capt. HOSKING stated that they had discovered a splendid lode in the eastward working of the 70, and which was being developed with such energy that from 1 ft. a month it was now opened up to a width of 8 ft. (Applause.)

Capt. HARVEY regarded with favour the cross-cut working, which he expected yet to reveal some good lodes both of copper and tin. (Applause.)

A cordial vote of thanks was unanimously passed to Mr. Polkinghorne for his dignified conduct in the chair, and his efficient direction of the business of the meeting.

THE UNITED VAN CONSOLS AND GLYN LEAD AND BARYTES MINING COMPANY.

The ordinary general meeting of shareholders was held at the Cannon-street Hotel, on Wednesday.

Mr. PRYCE JONES in the chair.

Mr. JAMES COOPER (the secretary) read the notice calling the meeting. The report and accounts were taken as read.

The CHAIRMAN said that bad and unfortunate as the position might be financially, he was glad to say that the property was still at Llanidloes, and he believed there was lead there, but how and when they would get it in paying quantities he was not prepared to say. They might have it to-day, or they might have it to-morrow, or they might not have it for some considerable time. There were two matters which chiefly accounted for the position the company was in to-day. One was the falling off in lead ore, and the second was the necessary payments mentioned in the accounts. Nothing additional had been spent upon machinery for two years, and nothing had been spent in general expenditure, and the money which had been spent had all been spent in developing the property. Within the last few months they had had discoveries of value, but he was not in a position to state what they might ultimately lead to. He had that morning received a communication from Capt. Roach, to the effect that the intermediate level had improved so much that it had gone on from 14 cwt. to 15 cwt. per fathom, and was now worth 4Z. or 5 tons per fathom, and the quality of the lead was really splendid. The week before last they sold 25 tons of lead, at 1Z. 1s. per ton, and by Wednesday next they would have 30 tons more ready for sale, which, if sold at the price of the last, would give

about 300Z. At the last board meeting the directors decided that they were not justified in spending 500Z. to 400Z. per month in expenses whilst the funds were in their present state, and, therefore, they had discharged half the workmen, so that this month the cost-sheet would be considerably less, and he hoped from this time the mine would do something more than pay expenses. He was prepared to take a further reasonable interest in the mine to keep it going. He might mention that he had received private communication from Capt. Vercoe, to the effect that there was a fine course of ore in the 50, which was one of the best shoots of ore he had ever seen in his life. He moved the adoption of the report and accounts.

Capt. ROACH, in answer to questions, said that in driving the cross-cuts they had some splendid slabs of ore, but was not concentrated enough. They had driven cross-cuts, and a rise had been put up, and recently they had broken into lead ore, which was continuous, and he calculated that the average yield of that ore was worth 3 tons of lead per fathom. On Monday last he commenced sinking upon this, and in about a fortnight he should be able to ascertain what the nature of this bunch of ore was, and if they got the same lode in the 50 they would have a very good mine in a very short time. He also believed that in the north part of the mine they had some good ground. At the rate at which they were at present raising lead they would be able to pay expenses and also leave something for the pockets of the shareholders. He believed there was a great future before the company, and that the present prospects of the mine were good.

Mr. BOLTON asked whether the ore was more stable in its character than some of the previous discoveries?—Capt. ROACH replied in the affirmative. They had 20 tons of lead now raised ready for the next sale.

The resolution for the adoption of the report and accounts was then put and carried.

The CHAIRMAN moved that the balance to the debit of the revenue account be passed to the cost of the mine.—Mr. BOLTON seconded the motion, which was put and carried.

The CHAIRMAN said the next question they had to consider was the financial position of the company. It was absolutely necessary that funds should be found, and it was to the interest of every shareholder to use his interest in order to place the credit of the company on a firm commercial basis. Annexed to the report was a scheme for raising the money, which emanated from the shareholders, and which the board recommended, and which he believed the shareholders would do well to approve.

Mr. BOLTON moved that the scheme which had been circulated amongst the shareholders be approved.—Mr. PETRIE seconded the motion, which after a short discussion was adopted.

A vote of thanks to the Chairman and directors closed the proceedings.

LONDON AND PROVINCIAL ELECTRIC LIGHTING AND POWER GENERATING COMPANY.

The statutory meeting of shareholders was held at the Cannon-street Hotel on Thursday.—Lord WALLSCOURT in the chair.

Mr. G. H. REDWOOD (the secretary) read the notice convening the meeting.

The CHAIRMAN said that he had merely to record the progress of the company since the allotment of shares, which took place on May 15. The number of shares allotted (including vendors') represented a total share capital of 68,000Z. In the first place, to carry out the objects of the company, it was necessary to take suitable premises, in respect to which some delay occurred. Finally, however, it had been arranged to rent premises at Newington Causeway, in the centre of a very important lighting district, which they were now fitting up with an installation of the company's system of electric lighting. These premises would be open for the inspection of shareholders and their friends at an early date, of which due notice would be given. He need scarcely remind the meeting that in its practical adoption electric lighting was as yet still in its infancy, and hence they entertained the greatest care and caution in taking the first steps in respect to contracts. It might be observed that the directors had under their consideration contracts for various important places—Malta, the Brighton Aquarium, &c.—but up to the present time no contracts had been entered into. The negotiations had been concluded; but it would be satisfactory for the shareholders to learn that the negotiations were pending which, if carried out in their present shape, it was believed, would give a highly satisfactory result.

Mr. R. P. WINGROVE, the manager, in reply to a question, said that he had only been appointed manager for the last three weeks, and it was early days to predict as to the result, and it was a little too soon to go into matters connected with the business of the company.—Mr. SHERIDAN wished to know when the first annual meeting of the company would take place.—Mr. WINGROVE stated that it would not be held before next May, which would be 12 months after the incorporation of the company.

The usual complimentary votes terminated the proceedings.

DEVON AND CORNWALL ELECTRIC LIGHT AND POWER COMPANY.

The statutory meeting of shareholders was held at the Cannon-street Hotel, on Wednesday.

Mr. W. H. OWEN in the chair.

Mr. LIDSTONE (the secretary) read the notice convening the meeting.

The CHAIRMAN explained that the nature of the goods they had to offer to the public was not such as to permit of their simply being shown and a purchase made. The introduction of the electric light was a process which must be gone through cautiously, carefully, and quietly, as there was a very strong interest in the gas companies opposing it. People expected to have the electric light at the same price as gas, but he argued that they ought not to expect to have a superior article at the same price as an inferior one. Still, there was a prospect of doing something, especially at Plymouth, a very enterprising place. Plymouth had received offers of the electric light very cordially indeed, and the directors were in communication with persons for the purpose of installing the light there provided they could come to terms. In the month of July there was a very extensive fancy fair held in the city of Exeter, and the light was shown there, the hall in which the proceedings took place having been most successfully lighted up, and the company had received payment for it for three days, and there was the prospect of one day to be received. There was a probability of doing further business in Plymouth, and there was a probability of their lighting the dockyard. One or two shareholders had expressed the opinion that the directors might have done more business. Business could be done to any extent, but the directors wished to make a profitable return, and were cautious not to go into matters which might not result profitably. They were carrying on negotiations for the introduction of their electric light at Penzance, the headquarters of the mining interest of Cornwall. There was there a very large field for the introduction of the light with the Cornish mines. Although the Cornish mines were not in any danger from gas explosions, yet the electric light would be of immense advantage to them. An exhibition of the light would be made at Penzance on the footing that Penzance should cover all the expenses, and he thought it would be a very good advertisement to the company. This being the statutory meeting he had no resolution to propose.

After a brief discussion with regard to the extent of the Lane-Fox license held by the company, which is at present in dispute, the proceedings terminated.

FOREIGN MINES.

ALAMILLOS.—Aug. 30: In the 120, driving west of San Martin's shaft, there is a small and regular lode, producing 1/2 ton per fathom. The 60, driving east of San Felipe's shaft, is opening up paying ground, worth 1 ton per fathom. The 40, driving west of San Felipe's shaft, at present continues unproductive. The lode in the 60, driving east of San Enrique's shaft, has improved to 1/2 ton per fathom. In the 130, driving east of Taylor's engine-shaft, there is a large, strong, and promising lode, with good stones of ore. In the same level, driving west of Taylor's engine-shaft, a good length of valuable lode is being laid open, worth 2 tons per fathom. The lode in the 80, driving east of San Victor's shaft, is very large, with good lumps of ore, producing 1 ton per fathom. The 50, driving in the same direction, being unproductive, is suspended. In the 80 fathom level (middle lode) driving west of San Victor's shaft, a very valuable piece of ore ground is being driven through, worth 3 tons of ore per fm. The lode in the 80, driving west of San Victor's shaft, is improving and yields stones of ore. The 50, driving west of San Victor's shaft is unproductive at present. The lode in the 70, driving in the same direction, is small and the granite very hard. The 60 cross-cut, driving south of Judd's engine-shaft, is now rather beyond the perpendicular of the lode. Linares winze, sinking below the 70, is holed to the 80; the lode produces 1 1/2 ton per fathom. Muriel's winze, sinking below the 60, is deep enough for a 70, and the men put to drive east from the winze; the lode is valued at 1/2 ton per fathom. Munoz's winze, sinking below the 40, is situated west of San Felipe's shaft; the lode is worth 1 ton per fathom. The weekly weighings of ore were kept up very regularly during the past month, and the stopes are yielding fairly well at present. The tributors returned in August 248 1/2 tons of ore. We estimate the raisings for September on company's account at 200 tons. The ordinary surface works are going on very steadily, and the machinery is in excellent condition.

BIRDSBYE CREEK GOLD.—Telegram from J. S. Goodwin: We have cleaned up at Red Dog; the gross return is \$7500. I send you a remittance of \$2000.

BRATSBURG COPPER.—J. Daw, A. W. Daw, Aug. 31: Murchison's 25, west lode, is 3 1/2 ft. wide, composed of quartz and rich copper ore, worth 18Z. per fathom. The 25 east has fallen off a little in value, now worth 10Z. per fm. The five stopes working in back are worth on an average 18Z. per fathom.—Yorks: We have six stopes working to the west of this shaft; present value 14Z. per fathom each. In No. 3 adit the lode is 2 1/2 ft. wide, worth fully 14Z. per fm. We are sinking a winze about 10 fathoms behind this end in a lode worth 14Z. per fathom. In the rise in the back of this level the lode is worth 12Z. per fm. The 50, driving west of the back work, is 12Z. per fathom each. In No. 2 adit the lode is 3 ft. wide, composed of hornblende, quartz, and rich copper ore, worth 9Z. per fathom; this end is not so good as No. 3, but the lode looks very promising. In the winze sinking in the bottom of this level the lode at present is yielding ore, but not to value. In the rise in back of this level the lode is worth 13Z. per fathom. The two stopes working in the bottom are worth 13Z. per fathom each. The stopes working in the back are at present valued 14Z. per fathom.—Johannes: In the rise in the back of this level the lode is worth 14Z. per fathom. The two stopes working in the back are worth on an average 12Z. per fathom each. The dressing machinery is in good working order, and the dressing is going on very satisfactorily. The bridge over the river is completed, and we have now started to build the loadings for the machinery. We are expecting the vessel Mary Owens every day, having sailed from Sweden 10 days ago. Via is chartered to be at Skein the end of September.

BUENA VENTURA.—Aug. 30: The lode in the 22, driving east of Henty's engine-shaft, contains occasional stones of ore, but not of any actual value.

In the 35, driving in the same direction, the lode is large, open, and regular, but does not contain any ore of value. The lode in the 10, driving east of Taylor's engine-shaft, is rather small, and yields a fair quantity of carbonate of lead. In the 30, driving east of Taylor's engine-shaft, the lode contains good stones of ore, and is being opened up at an inexpensive rate. Taylor's engine-shaft sinking below the 30 has reached the necessary depth for a 40; the lode has improved in the last few days. The ordinary work at surface are going on very regularly, and the machinery is in good condition. We have drained the north lode in the Ateliana set, and shall forthwith commence the sinking of the shaft to a new level; meanwhile we hope to set some tribute bargains both east and west of shaft. We set this some time ago to a party of men, who returned as much as 25 tons of ore per month, but were unable to cope with the water.

CALIFORNIA GOLD.—The directors received on Sept. 4 the following telegram from Mr. Rickard:—Good progress made in mine. Estimated profits for September, \$10,000 (2000). A further telegram, dated Sept. 7, states mill run with 25 stamper for first week, 150 tons, net value \$1800. We have made no discovery of ore in 1200 level. Good quality. Mill now running full capacity.

CALIFORNIA GOLD.—Mr. Rickard, Aug. 25: I confirm my telegram of yesterday worded "Water out," started mill on Monday; shall make returns regularly. The shaft is in good condition all the way down from surface to the 1300 level. There will, therefore, be no delay in clearing the drifts and in placing a full force of hands on the development of this important section. In three to four days hence the driving of the ends will be resumed. These being in fair grade milling ore, we expect a return of from 6 to 10 tons per fathom. The 1200 level west is cleared 200 ft. from the shaft, and stopping has been begun by a large party of miners. The lode in the stopes is from 1½ to 3½ ft. wide, worth on an average 3 tons of ore per fathom. They run a length of 200 ft. We have about 125 ft. of drift to clear to reach the end. This work will be carried on as quickly as possible, as it is very important to put the drift through to some good ore ground stated to lie ahead. The 1100 level west is cleared almost to the end, there being only a few feet more to set in order. The same level east is open 50 ft. from shaft, there remaining 130 ft. to clear to get to the end.

The mill was started on Monday last as stated in my telegram. The delay experienced in getting out the water from the mine constantly employed the engine, therefore a large proportion of the ore raised by tributers is still underground and the mill has been worked up to the present to half its force—25 head of stamps. In a day or two hence we shall have a full supply for the whole set, and 50 tons of ore per diem will be sent down to the mill. The tributers smelting or selected ore has been prepared, and will be forthwith sent to market. We estimate it at 100 tons, and value it at \$70 to \$80 per ton. The sale of this lot will realize probably \$7500 (15000). There is considerable stopping ground laid open and ready for excavation at this date, which will no doubt yield satisfactorily, and we have the means at our disposal in the fine machinery we possess of prosecuting vigorously a system of development underground which will keep up our reserves to a figure commensurate with the output we have determined to make henceforth—50 tons per diem.

CANADIAN COPPER AND SULPHUR.—F. Bennetts, Aug. 25: Hartford Mine: No. 5 shaft in the 70 east continues to look well. In the 50 east we have been cross-cutting, but have now resumed driving east on the vein. The vein in this drift is small. In the back of the 40 east we are putting up a rise; the leading part of the vein is about 18 in. wide, of average ore 5 per cent. The stopes in this part of the mine are turning out fair quantities of ores. At No. 3 shaft there is no material change in the 10 east or west. At No. 1 shaft there is a little improvement in the 35 west. At St. Francis mine the vein in the 30, north and south of the main shaft, still shows a leader of ores on the footwall. The smelting works are running satisfactorily.

CHILE GOLD.—The directors have received the following telegram from their manager:—Return for July 2011 ore, 27 days, 30 stamper.

COLORADO UNITED.—Mr. Ward's advice for the week ending Aug. 12: The mine foreman reports operations progressing as usual, and that all parts of the mine are looking the same as last week. The concentration works ran well, with only short stops for repairs during the week. Sent to Georgetown 132 sacks second-class cobbed ore, and 80 sacks zinc headings.

DEVALA MOYAR GOLD.—Extract from the report of the mine manager, Aug. 8: At Strathern the work is going on satisfactorily both in the reef and at the mill. During the last three days since the reef has been washed out by this means, and we find in every one a little fine gold. The wall is well defined by a regular and continuous course. No. 1 has been blasted into 5 ft., and I am of opinion this reef is very large, and shall have a good many feet more to drive through it. The quartz appears to improve in depth, consequently a large force has been put here to bring in a stope from the water level, and I am hopeful of good results at this point, in fact what we have seen so far indicates an improvement, hence our object in working with all energy. Have suspended work at No. 3 reef; the place is full of quartz and as yet no means of crushing it. In addition to the two places commenced prospecting last week, two more have been started this week, one still further to the north of No. 3 extension, and I confidently believe shall strike the same reef as No. 3. Although a long distance off the other appears to be in the direction of No. 4. Shall put an open cutting 6 ft. deep across this part of the estate, so as to catch anything that may be running in this direction.

At Bungalow Reef our progress is very slow, owing to the amount of preliminary work we have to do. Before driving the tunnel a quantity of boulders will have to be removed, and the debris cleared away. There is no alteration to notice in the trial pits in the coffee plantation. We have removed our alluvial machinery to the north of No. 3 extension, put it together, and have commenced to work. There is a long bottom before us to wash up, and in one place shall have to cross the back of a lode, where no doubt the production of gold will be very fair. The results of our last clean up is very fair, considering the ill-adapted machinery we have to contend with. About 2½ dwts. of free gold, and yield 5 dwts. of free gold to the ton, and taking the value of the pyrites into account I think the prospects of this mine are very cheering. We are now preparing quartz, and hope to crush from No. 1 in about a week.—P.S. I am pleased to inform you that since writing the above I have washed several pans of stuff from No. 1, which gave an exceedingly good show of gold, better than I have ever seen before in the Dingley Dell.

DON PEDRO.—The captain's letter, Aug. 5: Explorations: On uncovering the lode at first discovery and following it up, we find that the lode is heaved by a fissure, and is now at least 8 feet higher in the hill than when uncovered, hence the reason the level did not intersect it. Whether the lode will prove continuous or not cannot yet be determined, as we have followed it as far as is possible without having a large fall of overburden; to prove whether it continues or not we intend putting up a rise from cross-cut north, a large amount of stuff or ground has been removed, but a whole of very low class, ground being greatly disturbed.—Note North: No change in the ground to note since my last, the force here has been required to man the wagons at times, therefore progress slow.—Train Wagons: One set of axles and wheels prepared for a full level wagon, and another in hand for Bryant's, so as to have a spare set under hand in case of breakdowns at either place.

—Mine captain's report, Aug. 10: Explorations: Since my last some of the sides have been caving in, in some instances uncovering branches of lode, but of very inferior quality, otherwise no change to note.—Level North: An inclined rise started to lode Catta, near shaft, for the easier egress of the stuff broken in level, &c.—Train Wagons: The set of axles and wheels for Bryant's put to work and another set in hand, also axles of one wagon in adit level changed.

EUREKA (NEVADA) SILVER.—Sept. 7: Bald Eagle: The drift from the winze 30 ft. below the 150 level has been advanced 15 ft. during the week without any improvement, consequently we have arrived at the conclusion that the ore body does not extend in any direction from the winze; therefore work has been abandoned at all points from the winze, and work commenced from the stope near the 150 level.

FLAGSTAFF DISTRICT SILVER.—M. Gunderson, Aug. 20: Between the 3 and 4 drove 20 ft.; no change, small seam of iron keeping on ahead. Drift on top rise on the No. 1 level is in 30 ft., a gain of 1 ft.; no change in direction. Cross-cut on the No. 1 level drove 9 ft. for the week ending today. Yielded hard, promising better for ore. The ore on No. 1 level in cross-cut is changeable, but small and cleaner looking to pinch out one day, but comes back again. In the cross-cut over the tunnel level the iron still keeps on, ranges 3 to 18 in. In big rise on tunnel level, work done for the week 38 ft. in all, following small seam of iron; no other change. Number of men employed at the mine 22 all told.

FORTUNA.—Aug. 30: Canada Inco Mine: In the 70, driving west of San Pedro's shaft, there is a well formed and promising looking lode, producing ¾ ton per fathom. The 80, driving west of San Pedro's shaft, has declined in value in the past few days. The lode in the 90, driving in the same direction, yields occasional stone of ore, but not enough to value. The 90, driving south of San Pedro's shaft, is communicated by borer hole to Laidor's winze; the lode produces 1 ton of ore per fathom. In the 120, driving east of O'Shea's engine-shaft, the lode has become smaller and the ground harder during the past few days. In the 100, driving east of Lowndes' shaft, the ground is slightly disordered, and the lode has consequently declined in value to ¾ ton per fathom. The lode in Munro's winze, sinking below the 70, is split into valuable branches. Arab's winze, sinking below the 110, is laying open moderately productive ground worth 1 ton per fathom.

Los Salidos Mine: In the 175, driving west of Taylor's engine-shaft, small branches containing spots of ore are crossing the end obliquely. The lode in the same level driving east of Taylor's engine-shaft is variable; some very fine rocks of ore have been broken in the past fortnight, giving ¾ ton per fathom. The 145, driving east of Taylor's engine-shaft, has opened to a very good and promising lode, worth 3 tons per fathom. The 130, driving in the same direction, yields occasional stone of ore, valued at 3 tons per fathom. In the 120, driving east of San Pablo's shaft, there is a compact regular and well-defined lode, producing 1½ ton per fathom. Barnum's winze is being sunk below the 130 at a good rate in a lode worth 2 tons per fathom. Bey's winze sinking below the 35 has fallen off in value to ¾ ton per fathom; the ground is favourable, and cheaply opened.

San Antonio Mine: The 55 driving east of Henty's engine-shaft yields occasional good lumps of ore, but not enough to attach a value to. The lode in the same level driving west of Henty's engine-shaft is large, composed of barytes, decomposed granite, and spots of ore. In the 45, driving west of Henty's engine-shaft, the lode is small and poor, and the ground hard. In Perez winze, sinking below the 45, there is a good deal of granite mixed with the lode, and spots of ore only.—San Francisco Mine: In the 25, driving east of Clarin shaft, a good lode has been passed through in the fortnight, but it has declined in value to ¾ ton per fathom. The lode in the 40, driving east of San Francisco shaft, is larger and more promising, and contains good spots of ore. In the 50, driving in the same direction, the ground is harder and the lode small and poor. The lode in the 50, driving west of San Francisco shaft, is large and hard, containing good spots of ore, but nothing to value. In the 40, driving west of San Francisco shaft, the ground is greatly disordered and scarcely any lode to trace. The lode in the 25, driving east of whim shaft, is regular, and contains soft clay and spots of ore. In the same level, driving west of whim shaft, the lode yields occasional good lumps of ore worth ¾ ton per fathom, and promises improvement.

INDIAN GLENROCK GOLD.—Telegram from the general manager, A. E. Pinching: Commenced crushing regularly; most successful beginning; Saturday.

INDIAN GLENROCK GOLD.—Telegram from Mr. Pinching, the general manager: Commenced crushing regularly, most successful beginning, Saturday. ISABELLE GOLD AND SILVER.—The interim manager writes, Aug. 14, as follows:—There is nothing unusual to report. The machinery has been running steadily during the past week. Ore received, 40,378 lbs. Charges drawn from furnace, 39. We have to-day cast bar of bullion No. 35 of 623 ozs. Assay value \$113.97.

Aug. 15: I visited the mine yesterday, and found the north end of the stope producing most of the ore now being extracted. I have directed the foreman to have work resumed in the drift running west from the winze chamber on the tunnel level. There is quite an accumulation of second-class ore at the mouth of the tunnel that can be profitably treated when the capacity of the mill is sufficiently increased. We are obtaining the usual quantity of copper, but the exact weight cannot be determined without first drying, sacking, and weighing, which would be a waste of labour if it is decided to melt the cement here into bars.

KAPANGA GOLD.—Telegram from the manager at Comorand: Since last message we have crushed 55 tons of quartz. The yield has been 224 ozs. of gold. I have sent you 60 ozs. of specimens via Suez Canal. Pumping 70.

LA PLATA MINING AND SMELTING.—Statement for week ending Sept. 2: Ore purchased, 878 tons; ore smelted, 823 tons; silver produced, 115,000 ozs.; lead produced, 135 tons. Silver-lead bars consigned to refiners, 115 tons. Value of consignment, \$31,000—\$458.

LINARES.—Aug. 30: Pozo Ancho Mine: The lode in the 115, driving east of Warner's engine-shaft, contains stones of ore, but not enough to value. In the 130, driving in the same direction, the lode has fallen off in value to 1 ton per fathom. The lode in the 130, driving west of Warner's engine-shaft, is large and regular, but without ore. In the 115, driving west of Warner's engine-shaft, a large piece of valuable lode is being laid open, producing 2 tons per fathom. The lode in the 135, driving west of Pell's engine-shaft, has improved in the past fortnight to 1 ton of ore per fathom. In the same level, driving east of Pell's engine-shaft, the lode has improved to ¾ ton per fm. The lode in the 120, driving east of Pell's engine-shaft, has declined in value to ½ ton per fathom. In the 105, driving east of San Francisco shaft, the lode has also fallen off in the past fortnight to 1 ton per fathom. In No. 245 winze, sinking below the 135, there is a compact, well defined, and regular lode, producing 2 tons per fathom. The lode in the No. 246 winze, sinking below the 90, is small and very continuous, being worth 1 ton per fathom. In No. 247 winze, sinking below the 100, there is an open lode, with good stones of ore, worth ¾ ton per fathom. The usual quantity of mineral was delivered to the stoves during the past month, and the stopes have not undergone any change of importance. The various works at surface are kept on steadily, and the machinery is in good condition. We estimate the raisings for September, five weeks, at 300 tons.

Quintones Mine: In the 100, driving east of Taylor's engine-shaft, there is a powerful lode with good stones of ore worth ¾ ton per fathom. The lode in the 90, driving in the same direction, is strong and well defined, producing ¾ ton per fathom. The men are making good progress with Taylor's engine-shaft sinking below the 100. Diego's winze, sinking below the 80, is going down in a valuable lode, producing 2 tons per fathom. We estimate the raisings for September at 100 tons.—Majada Honda Mine: In the 35, driving east of San Eniquita shaft, there is a strong and well formed lode with good stones of ore. The lode in the 70, driving east of Santo Tomas shaft, is disarranged and unproductive. In the 70, driving east of San Francisco shaft, the lode is small and compact, producing 1 ton of ore per fathom. The 70 (middle lode) driving in the same direction, has improved to ¾ ton per fathom. The works at surface are kept on very regularly, and the machinery is in a very efficient condition. The usual quantity of mineral was returned during the past month, and the stopes are yielding fairly well at present.

NUNDYDROG GOLD.—B. D. Plummer, Aug. 12: Mining Operations: At Maharajah reef, in the 62 ft. level, at air shaft, the winze sinking in bottom of this level is 50 ft. north of cross-cut. It is down 15 ft. below the 62; the lode is 2 ft. wide. At Taylor's shaft the 95 level has been driven about 53 ft. south of the cross-cut; the vein or fissure is 4 ft. wide. There are two good walls. The filling matter is broken slate and schist, stained with iron. In the Eastern reef (McGibbin's shaft) the 70 ft. level, north end, has been driven on a course of the lode 105 ft. At the present end the vein is 2 ft. wide. It has a promising appearance. This is speedy ground, and mining can be carried on cheap. I have for a time suspended operations in the east cross-cut at Taylor's shaft. The ground is very hard and expensive. It has no immediate prospect of getting the vein, and I think it better to hasten on those places where a quicker development can be obtained. There is nothing new to report from other points of operation. All the work in connection with the mine is going on as fast as we can expect, and it is well and cheaply done.

OREGUM GOLD.—W. Eddy: Main Shaft: During the last fortnight we have sunk this shaft 1 ft. 6 in., and I have reset to same contractors to sink at old price, 35 rupees per foot; the ground in the bottom of the shaft is of the same description as formerly reported on. We have driven east from bottom of the main shaft 2 fms. 3 ft. 6 in.; the ground is easier for working, and I have set to the same contractor to drive at 8 rupees per foot extent in both these contracts at the discretion of the agents.—Sunday's Shaft: At the 120 ft. level the cross-cut is driven east 3 ft.; the ground is hard, and there is a difficulty in keeping coolies to work; the present contract is at 20 rupees per foot, extent 1 fm. At the 80 we have cleared up the bottom of the level and started to sink, but with one gang of coolies our work as to the 120 cross-cut must be kept in advance to unwater this air-winze. In sinking this air-winze we find a lode about 1 ft. in width, composed chiefly of quartz showing free gold in a conical strata of ground with a well defined footwall. In giving you this my monthly report for the first time, I beg to say that the same surface expenditure we can save by more extensive sinking underground on the lode, and in my opinion such workings will prove remunerative, and that you are in possession of the Oregum of the most promising, best equipped, and best situated mining set in this extensive mining district.

PESTARENA UNITED GOLD.—Samuel Gifford, Sept. 1: Pestarena District: In the 80 north, on No. 1 lode, the schist is stiffer and more massive, but otherwise there is no change. The 110 south has also got into harder rock, and gives a little extra ore. The 120 south is giving a good yield, at 18 dwts. per ton. It is a large width of schist, with branches of ore on either side. The north end will be resumed shortly. In the shaft sinking under the 120 the lode is cut through and wholly in shaft, showing small but promising improvement, and yielding at present 2 tons of 14 dwts. per fathom. The 33 north, on No. 5 lode, continues in stiff schist, with occasional patches of sterile quartz. The 55 south, on No. 5 lode, has got into poor ground, with the lode carrying ore rising above it. The 65 south is passing through the cross-course, and is without ore at present. The 80 south is yielding 14 dwts. per ton. At 84 dwts. per ton it goes forth on the junction of two diverging branches of ore, mixed with sterile rock cut off by a flat floor above. The north end is now started on a small lode, promising early improvement. The driving of the 90 south has been resumed with a small leader of ore, and it should get into good ground quickly. The present yield is 2 tons per fathom, at 10 dwts. The 90 north has a kindly lode of felspathic rock, with ore half way up the end, and gives 3 tons per fathom, at 15 dwts. The Pozzane adit north shows a lode 2 ft. wide of mineralised rock, with coatings of pyrites, and lately a few stones of ore have appeared in sole of level.

The quantity of ore located for August was 592,408 metric tons, which produced 480 ozs. 18 dwts. 8 grs. of bar gold, or an average of 16 dwts. 5½ grs. per ton. All the machinery continues in good condition.—Val Toppa: The intermediate of Zero end south, on new lode, is in good talcose schist, carrying strings of quartz. No. 1 level south shows bands of quartz through 2 metres in width, between regular walls. The cross-cut is hard, and there is a difficulty in keeping coolies to work. The cross-cut east from the flat lode passes through alternating bands of sterile quartz and talcose shale. In the rise in the back of No. 2 level, from the flat lode, the quartz continues, but it yields no gold at present. The rise in No. 2 level, on the new lode, goes up in a well-defined lode of 2 ft. wide, yielding low grade stuff. In No. 3 level south, on the new lode, the quartz cut makes trough, but its character is not good, and the rock about it is not so good. The amalgamation account for the past month shows 459,621 metric tons of ore treated, and 117,021 dwts. 6 grs. of bar gold produced, the average yield being 5 dwts. 3 grs. per ton.

PIERREFITTE.—The manager reports under date Sept. 3, as follows:—"I am pleased to tell you we have completed the erection of the horse-whim at the South Mine, and by to-morrow evening we shall have a double line of tram-road laid from the bottom of the shaft to the station of the wire rope. On Tuesday we shall commence hauling up ore by this machine, and shall then be in a position to bring to surface a large quantity daily, and at a cost much less than we have been paying. I do not see any change in the lode at this mine. It continues to be very rich. Out of about 90 tons of ore broken last week we took out about 20 tons of silver-lead hand-picked and dressed by machines, and 7½ tons hand-picked blende. No rain has fallen during the week, and in consequence we are again short of water. We shall be obliged to stop the dressing machinery, I fear."

PONTOIAC D.—W. H. Rickard, Sept. 1: Monthly Report: Roure Mine: The 225 metre level, south from Taylor's shaft, continues in disturbed ground. The lode in the 200 metre level south has improved in appearance 1 metre wide, producing some pretty good quality ore at times. The 175 metre level south is in a regular but unproductive lode.—Virginie's Lode: The 100 metre level, south from cross-cut, yields ¼ ton of ore per current metre. The rise in the same level north, on eastern part, is unproductive. The 60 metre level, on two splits of the lode, yields ¼ ton of ore per current metre in each end. The 20 metre level, on eastern part, is unproductive. Our stopes are in tribute pitches at the different levels are of about the same value as in former months.—Seymour: The lode in the adit south continues pretty regular, but of rather unkindly appearance.

St. Denis: The lode has been intersected at the 30 metre level and driven on 3 metres northward, for which length it presents a promising appearance. We have set the shaft to sink to a sufficient depth for fixing the lift of pumps, and for cutting trip-plat, during which time but little will be done on the lode, but as soon as the pump is fixed the level will be at a cost much less than we have been paying. At Micoc but little has been done in the tribute pitches, which produce but little ore.—La Brousse: The sinking of Alice's shaft below the 180 metre level goes on regularly, notwithstanding an important increase of water issuing from the lode, which crosses the shaft at this depth (33 metres under the 160), presenting, as far as seen, a strong and regular appearance, composed of quartz and good stones of ore; more will be seen of it in the present month's sinking. The 160 metre level, north of shaft, yields ¼ ton of ore per current metre. The same level south is being driven in a hard and unproductive lode. The 140 metre level south yields a little low quality ore at times irregularly. The 120 metre level north continues in wet disordered ground. Our stopes have produced fairly, and the tribute pitches well during the month.

Frantal: The 110 metre level south of St. George's shaft yields ¼ ton of ore per current metre. The same level south yields ¼ ton. The 90 north on western part of the lode is poor. We have suspended the 90 south on the eastern part, and begun a cross-cut further south towards the same part, where we hope to find it more productive. The same level south on main lode yields stones of blende and pyrites spotted with lead ore. The 70 ends, both north and south, are in unproductive ground. The 30 cross-cut west is in hard rock. Our tribute pitches throughout this mine fairly maintain their yield. The cross-cut at La Combe has intersected the lode, which is altogether 2 metres wide, split into several branches, and composed of gneiss, quartz, a little barytes, and pyrites spotted with blende and traces of lead ore. We have set to open on its course northward in hopes of finding something better.—General Remarks: We have had more time than usual lost by our miners in gathering in the harvest be-

cause of the uncertain state of the weather, but all are again returned to their work in full force. Our dressing operations have been carried on without any serious interruption, and our samplings have amounted to 207 tons.

POTOSI GOLD.—Telegram: 1276 to 1300 tons of quartz raised; 1051 to 1075 tons of quartz milled; 1101 to 1125 ozs. of gold remitted. Quartz showing 1 oz. per ton; 26 days full work.

—The resident manager, Potosi (July 20), writes: The quality of the quartz is improving, and as we have a considerable stock of ore on the mill dump, I am looking forward to a good run this month.—Machinery: The locomotive Edith Helen is running very well indeed, making six or seven trips with three trucks every day. The saw-mill is running again, but the boiler-maker has made only a very poor job of it. This man, McBride, has given way to drink, and as there will be much boiler work in Peru I beg to recommend that a first-rate boiler-maker (sober) be sent from England.—Chile Mine: I herewith enclose Capt. Hampton's report, which I trust you will find satisfactory. I also enclose tracing of work done underground up to date.—Peru: The work here is progressing well. The lode in Atwood shaft has been made again, and is widening as we go down. At present the lode is about 18 ft. wide. An assay made of some rock taken at a depth of 112 ft. gave 5½ ozs. of gold per ton. The saw-mill will be ready within a fortnight. The old mill engine from here is now being sent over, and as soon as we get the boiler put together and the stack up the sawing of lumber for the mill will be commenced. Health remains very good.

—Capt. Hampton, July 20: Main Shaft: The men are now engaged putting in casing and new bed plank below the No. 8 level; this being done we shall commence to sink the shaft, at the same time drive back west to prove the ground in that direction. No. 1 shaft has been sunk during the fortnight 10 ft.; the lode appeared to be very much the same in nature as that sunk through in the main shaft, although it has somewhat improved in the last day or two, and I have good reasons to believe that we shall strike the lode again in a few feet further sinking. The lode in the stope east of this shaft at the No. 8 level has a little improved during the past fortnight; the lode is 4 ft. wide, and we have a large output of quartz from this stope daily.—Air Shaft: Nothing has been done only in the stope east of this shaft in this part of the mine; the lode is 8 ft. wide, and produces some good rock from the mill; all the stopes and shafts are well timbered, and the mine perfectly safe in that respect.

RHODES REEF GOLD.—Extract from the report of the mine manager, Aug. 3: We have completed the tramway from the new reef to the mill, and the No. 3 new tunnel is progressing satisfactorily, and is now 75 ft. When the gear for which we have been delayed arrives we will soon have mill running 20 heads, Chilean mills, buddles, furnaces, &c.

—The directors have received the following telegram, dated 8th inst.: "Buddle gear arrived, will start mill next week; all things going well."

RICHMOND CONSOLIDATED.—Telegram from mine at Eureka, Nevada: Week's run (one furnace), \$22,000, from 483 tons of ore; refinery, \$25,000.

—Samuel Longley, Aug. 14: I have to report the following advance and the present condition of the dead work for the week ending Aug. 14: The 200 west drift from near station has been run 17 ft. in limestone; the 300 south-west drift from station (Burleigh drift) has been run 11 ft. in limestone. The 300 south-east drift from south-west drift has been run 9 ft. in limestone (Burleigh drift). The 400 west drift from south drift to Little No. 10 chamber has been run 10 ft. in limestone. The 800 west drift from north drift from quartzite (Burleigh drift) has been run 17 ft. in limestone. The 800 new north drift from quartzite drift (Burleigh drift) has been run 24 ft. in limestone. The 900 north drift (No. 2) from west drift from west drift has been run 17 ft. in limestone (Burleigh drift). The 1050 drift station in quartzite progressing favourably.

RIO GRANDE DO SUL GOLD.—Henry Eddy, July 15: During the past week the No. 2 gallery has been driven west 15 metres and is now 3 metres west of shaft; I expect more progress during the next fortnight. The two stopes east are without change since last report. The cross-cut north-west, a continuation of the old cross-cut, shows patches of quartz. I think this cross-cut to be a good speculation, on account of the several lodes it must necessarily intersect. The cross-cut south from No. 1 gallery is without change. The rain throughout the week has nearly filled the western shaft and workings connected with it, but this will not affect us, as no attempt will be made to work or drain them until No. 2 gallery is right under, when it can be drained at little expense.—Reduction Works: We are proceeding regularly with our work, and shall forward the month's gold on July 24, and will advise you next week of the quantity.

Henry Eddy, July 22: During the past week No. 2 gallery has been driven west 24 metres, and is now 54 metres west of shaft. The lode is assuming a more defined appearance on passing through the slide, and every effort is being made to push it on, so as to get under our most productive ground west. The cross-cut immediately adjoining the shaft east, produces 18 dwts. of gold to the ton. No. 2, 30 metres east, also produces 18 dwts. to the ton. The cross-cut north-west from No. 2 gallery is spotted with quartz, but the ground is only moderately hard for driving. The cross-cut south from No. 1 gallery is in moderate ground for driving, and is without change.—Meza's Lode: This has produced some fair quality stamping work, but its working, through being open, can only be intermittent at this season of the year.—Works General: But the lode has not as yet been filled and all the open workings, but this has not at all affected us in the prosecution of our principal points, excepting for two or three days at No. 1 stope (open) in the end of the shaft, the working of which is now again resumed and will soon be away from exposure, so that future floods will have no effect.—Reduction Works: The roads from the mine have been utterly impassable for conveying any loads, but we are again in a favourable condition, so that carting will be resumed on Monday, the 24th, and the month's gold will be cleaned up and forwarded on July 29 with all necessary care. But the lode would have been forwarded on the 24th, if the whole lode, I consider the works, for this season of the year are proceeding favourably.

RUBY AND DUNDERBERG CONSOLIDATED.—Report on mines for the week ended Aug. 13: Dunderberg: The main shaft is in very hard ground at present; progress this week 8 ft.; total, 130 ft. below the 700 level. There is no improvement in the No. 8 ore body above the 700, the ore being very low grade at the three points we are now working. At one point the ore is making down, and it is the best prospect we have in the mine at present. At two points the ore is so very low grade that a very small portion of it is being saved. A drift has been commenced from the 700 to intersect the ore body. The north drift from No. 8 cave, 40 ft. below the 700, has been advanced 10 ft. during the week on the fissure containing low grade ore and iron. The stope at the end of the west cross-cut from the 600 is improving slightly. The north branch of the 300 west cross-cut has been advanced 16 ft. during the week without any change; total, 195 ft. from the point of connection with the south branch. Have shipped 14 tons of ore during the week, and have 24 men, eight contractors, and six tributers at work.—Home Ticket: The ore body near the surface continues from 4 to 6 ft. in width. Have shipped 12 tons this week, and have about 10 tons at the mine ready for shipment. Four men at work.

SILVER PEAK.—W. MacFarlane, Aug. 10: Up to this date all is progressing well at the mine, and the appearance of everything still continues good. The heading and cross-cut is being pushed on as rapidly as the machinery and staff of men will admit. Out of six assays made from the feeders, spurs, and leaders cut in the last 100 ft. of the tunnel the average for silver was considerably over 200 ozs., and a little over 1 oz. of gold per ton. The appearance of the heading continues good, the ground is much harder than it has been for some time, with strings of quartz and pyrites of iron, and letting out water. The cross-cut on J. B. Norris lode looks as good as last reported, fully 4 ft. of fine white mineral-bearing quartz in sight, highly mineralised throughout with every foot a still richer body of mineral ahead as the lode gets opened out. The general character of this lode, so far as cut, is fine rich quartz, pyrites of iron, carbonate of lime, galena, and very fine steel galena, with traces of bismuth-silver, but exceedingly wet for working. At the present time a great body of water is flowing from the lode, which I look upon as most favourable. I have some difficulty in keeping men at work at this point on account of the water. I am now working the two drills alternately in the heading and cross-cut, so that the water in the tunnel is not so rapid now. Please inform me if the number of this report corresponds with what you have received, as there has been great carelessness of late at the post-office here; however, there has been a change in the postmaster last week—not before it was needed. In respect to the accounts, I am preparing them to send you up to date.

STANDARD DIAMOND.—F. B. Salmons, Aug. 10: We began washing last Friday with one machine, and for a day and a half washed the tailings of the Friday we found so poorly in, and which we had put on one side for the purpose of re-washing; our finds were 270 carats. The only way we can account for the diamonds going out of the machine is that there being some quartz reef mixed with the blue ground prevented it becoming thoroughly pulverised, and that it has only gone to pieces or become decomposed since it has been exposed with the tailings. Of course we shall now re-wash these tailings; at present we are washing fresh blue and tailings together, and we hope to make large shipments hereafter. There is now on hand two days' washing, amounting to 1200 carats. We are doing better work this week in the mine, and are pulling close to 500 loads in blue dirt. Last week we were stopped nearly two days by the Inspector claims to trim down reef. Number of loads 18 cubic feet, reef hauled 215½. Number of loads 20 cubic feet of blue hauled 987; no blue washed; 103 carats diamonds found in claim, 254 carats diamonds found washing, 414 carats diamonds found breaking up; total value of diamonds about 13500; value reef hauling, 4050. \$s.; total of wages sheet, 10077. 11s. 6d.

COPYING MINE PLANS.—The advantage of being able to accompany a mine report with a sketch plan has frequently been referred to by correspondents of the *Mining Journal*, but the cost of making a dozen or two of copies by the usual methods has hitherto rendered it impracticable to reproduce plans for the use of shareholders. For several years past however the French have been accustomed to produce a few dozen copies of even the most complicated tracings by a process so simple that it can be conducted in any drawing office or accountant house. The apparatus consists of a plate of thick glass (good window glass) somewhat larger than the tracing to be copied—a half inch margin all round is ample; and a smooth board the same size as the glass. The board has three or four thicknesses of flannel stretched tightly over it. The copies can be made on any good white paper, which is rendered sensitive by brushing over with a solution of ammonio-citrate of iron 1 oz., red prussiate of potash 1 oz., water 8 ozs., all put in a yellow glass or stone bottle and well shaken. The paper must be wetted and dried in the dark. To take the copy the sensitised paper is laid face upward on the flannel board and the tracing laid smoothly over it. Both are pressed tightly together with the glass and exposed to the light from five minutes in the sunshine to two hours on a cloudy day, and the sensitised paper is then washed in clean coal water, when the tracing will be found beautifully reproduced in white lines on a fine blue ground. The cost of apparatus and chemicals will not exceed a few shillings.

Mining Correspondence.

BRITISH MINES.

BEDFORD UNITED.—H. Vercoe, Sept. 5: I beg to hand you my setting report for eight weeks ending Oct. 28.—North Lode: The lode in the 115 east is not taken down. The 103 west to drive by two men at 94. per fathom; lode worth 41. We have 11 tribute pitches working on the north lode, tributes varying from 13s. 4d. to 15s. 1d., and we have 15 hands overhauling the old burrow for muddle and copper.—McCallan's Shaft, Bridge Lode: The shaftmen are getting on fairly well in sinking. The 42 west to drive by four men at 44. 10s. per fathom. The 42 east to drive by six men at 51. 10s. per fathom. We have cut through a part of the lode in the present end, and the composition of the lode is good, composed of peach, muddle, yielding good stones of black and malleable copper of excellent quality. We may fairly calculate to reach the shoot of ore in this end about another month. The 30 east to drive by six men at 71. 10s. per fathom; lode worth 104. The lode is not rich for ore as we have had it for some time past, but it has a very strong and masterly appearance. The winze sinking below this level is down 3 1/2 fms., in which the lode is a little disordered for the present. We are taking down the south part of the lode and it looks promising, is worth 131. per fathom. No. 1 stope is worth 237. No. 2 stope is worth 204. The lode in the 20 east is more promising, driving at 54. 10s.

BEUNO CONSOLS.—J. Woolcock, Sept. 7: Engine-House Level: The stope in the back has improved for ore since my last. There is a solid rib of ore on the wall from 8 in. to 10 in. wide, as you saw last week. The lode in the 45, south from new shaft, looks splendid. The driving from Wood shaft not quite so good for ore. The chain and wheels for connecting are all at the mine to-day, consequently we shall be ready for winding by the end of this week from the engine-shaft; I expect wire-rope by then. Therefore, during next week I expect you will visit the mine to see the engine start to work; however, you shall all have a notice when we are ready.

BLUE HILLS.—S. Bennetts, R. Harris, Sept. 6: There is not much change in the lode in the Blue Burrow shaft sinking below the 40. The 40 east end is worth 71. per fathom, and the 30 east end 84. per fathom. In the Gumpas adit west end the lode is worth 84. per fathom.

BWLCH UNITED.—Wm. Northey, Sept. 6: No change worthy of remark has taken place in the lode in the 104. The stope in the back of the 50 has improved, and is now worth 1 1/2 ton of silver-lead ore per fathom. No change in the cross-cut at the 50. In the 12 east, under adit, the lode is daily improving in size and character, and producing good saving work for the dressing-floors. Three stopes, in back of the 30, will yield an average of 15 cwt. silver-lead ore per fathom. The stope in the back of the 15, under adit, on Marvin's lode, will yield 12 cwt. of silver-lead ore per fathom. It has a favourable appearance for a further improvement. The machinery throughout the mine is in good order and working well. Drawing and dressing are carried on with usual regularity.

CARN CAMBORNE.—W. C. Vivian, Sept. 7: In the 155, west of engine-shaft cross-cut, on the north lode, the lode is small. In the 95, west of sump, on the south lode, the lode is 4 ft. wide—sparry, ugly, and wet, with yellow copper ore scattered throughout it; not a course of ore, but promising to lead to one—in fact, a very fine looking lode. In the 70, west of engine-shaft, we continue driving a cross-cut north, not having yet reached the north lode. In the 40, west of engine-shaft cross-cut, on the north lode, the lode is 4 ft. wide—a hard, sparry, strong lode, impregnated with copper ore and blende. This lode will certainly make a bunch of copper ore as it gets nearer the cross-cut, which is about 10 fms. before the 40 end.

CARNARVONSHIRE GREAT CONSOLS.—W. H. Boriase, Sept. 7: Beyond a marked improvement in the 24, east of Endean's engine-shaft, since last report I have nothing new. All other bargains are quite equal to last week's valuations. I am giving the crusher a thorough overhaul, and hope to get the wheels from the foundry on Saturday, and to start crushing again on Tuesday, if possible.

CATHEDRAL CONSOLS.—Stephen Davey, Sept. 7: The lode in the engine-shaft is impregnated with black oxide and good stones of yellow copper; there are indications of soon making a good discovery.

COED-Y-FEDW AND PANT-Y-BUARTH.—R. Prince, Sept. 7: Rowland's Shaft: Engine fixed and started, and appears to answer our purpose admirably. We are now clearing the shaft, and shall sink forthwith. The driving north at the 107 is in excellent ground, and we are meeting with nice stones of lead ore. Full report in my next.

CROOK BURR.—Jacob Craig, Aug. 28: We are now walling the sides and timbering the roof of the new level. The wet weather is much against us getting on with the work, as it causes the clay to slip before we can get it secured with the wall. There are indications of us being near the plat in the level sole.

OWMSIFWITH.—Joseph B. Rowse, Sept. 6: No change worthy of remark has taken place in the value of the lode in our stopes since the date of our last report. The elvan pitches, worked by 42 men, are yielding fairly well, and apparently the men are making fair wages, and will, I have no doubt, somewhat increase our returns in proportion to the number of hands employed. We have recently dispensed with a number of men who were formerly engaged about the stuff, as our tributes have contracted to deliver their orestuff on the dressing floors. Our dressing machinery is kept fully employed upon stuff from underground, and halvans from the Big Rock. Some good blende stuff has been sent down from the Big Rock during the past week. We continue meeting with good stones of lead in the old burrows. Our supply of water is good, and samples of 30 tons of lead ore were sent out on the 29th ult., for sale on the 12th inst.

CWM DWYFOR (Brynarian).—John Davies, Sept. 6: Pensarn: There is no change in the lode in the 20 driving north since last report. The lode keeps its regular bearing and underlay. Our progress in driving this week is nearly 2 fms. The machinery works well.

D'ERESBY MOUNTAIN.—J. Roberts, Wm. Sandoe, Sept. 6: The rise is looking rather better with regard to the ground, and its value for lead is equal to what it was. The shaft in the 30 east, west of Bennett's shaft, we have a very promising lode about 2 ft. 6 in. wide, and worth 64. 5s. per fathom. The No. 1 stope in the back of this level has greatly improved during the last few days; the lode is about 8 ft. wide, and worth 204. per fathom for copper and arsenical muddle. The 30 end, east of Bennett's shaft, has fallen off a little in value, but this we believe to be only temporary; the lode is 2 ft. 6 in. wide, and worth 71. per fathom. The rise in the back of this level is going up in a very valuable piece of ground; the lode is 5 ft. wide, and worth full 104. per fathom. In the 12 end, west of Bennett's shaft, we have a good leader of black and yellow copper ore; the lode is 4 ft. wide; worth for copper and arsenical muddle 82. per fathom. The stope in the back of this level is worth 54. per fathom for arsenical muddle. The lode in the adit end, east of Bennett's shaft, is 4 ft. 6 in. wide, and worth 64. per fathom for arsenical muddle. The No. 1 and 2 stopes are worth 94. per fathom for arsenical muddle.

DEVON FRIENDSHIP.—F. R. W. Daw, Sept. 6: As requested I send you the following report on the value of every point we have now in operation in our underground workings:—In the 30 end, west of Bennett's shaft, we have a very promising lode about 2 ft. 6 in. wide, and worth 64. 5s. per fathom. The No. 1 stope in the back of this level has greatly improved during the last few days; the lode is about 8 ft. wide, and worth 204. per fathom for copper and arsenical muddle. The 30 end, east of Bennett's shaft, has fallen off a little in value, but this we believe to be only temporary; the lode is 2 ft. 6 in. wide, and worth 71. per fathom. The rise in the back of this level is going up in a very valuable piece of ground; the lode is 5 ft. wide, and worth full 104. per fathom. In the 12 end, west of Bennett's shaft, we have a good leader of black and yellow copper ore; the lode is 4 ft. wide; worth for copper and arsenical muddle 82. per fathom. The stope in the back of this level is worth 54. per fathom for arsenical muddle. The lode in the adit end, east of Bennett's shaft, is 4 ft. 6 in. wide, and worth 64. per fathom for arsenical muddle. The No. 1 and 2 stopes are worth 94. per fathom for arsenical muddle.

DEVON GREAT CONSOLS.—Isaac Richards, Sept. 7: Monthly Report: During the past month the 144, east of count-house shaft, has been driven 1 ft. 2 in. 3 in., the lode proving 3 ft. 5 in. wide, composed of capel, quartz, and arsenical muddle and a little copper ore.—Wheal Emma, Inclined Shaft: The cross-cut north at the 137 ft. level, east of Friend's cross-cut, has been driven 2 fms. 5 ft. 6 in., the ground proving favourable for progress and congenial for the production of mineral.—New Shaft, New South Lode: The lode at the 115 east has been further cut into 4 ft., making altogether 3 ft., consisting of strong capel, quartz, peach, a large proportion of muddle, and some copper ore of good quality—a very promising lode.—Railway Shaft: The 193 west, on the south part of the lode, has been driven 3 fms. 5 ft. 6 in., lode proving 5 ft. wide, of a most promising character, and yielding 2 tons of copper ore and 3 tons of muddle per fathom. The 160 ft. level west, on the south part of the lode, has been driven 3 fms. 2 ft. 6 in., the lode proving from 3 to 4 ft. wide, composed of capel, quartz, and small quantities of muddle and copper ore.—Watson's: The engine-shaft has been sunk 1 fm. 5 ft., making the total depth below the 88 10 fms. 2 ft., the ground proving of a very congenial character for the production of mineral, and favourable for progress. The western shaft has been sunk 2 fms. below the 20, the ground also proving of a favourable character for the production of mineral. The 20, east of the western shaft, has been driven 1 ft. 4 in., the lode proving 4 ft. wide, of a very promising character, and yielding good stones of copper and muddle ore.

DEVON GREAT UNITED.—Isaac Richards, Sept. 7: In the 120, east of Willersford's shaft, the lode is 2 ft. wide, composed of capel, quartz, muddle, and a little copper ore. In the 120 west the lode is 2 1/2 ft. wide, of a promising character, and yielding some arsenical muddle and copper ore of good quality. In the 60, west of Watson's shaft, on the Capel lode, the lode has increased in size, and is now 1 1/2 ft. wide, composed of capel and quartz, with small quantities of muddle and copper ore. In the 50, west of Watson's shaft, on the middle lode, the lode is 1 1/2 ft. wide, and yielding some good quality copper and muddle ore. The men are getting on fairly well with working the rock-drill, about 6 ft. having been driven. We hope, however, to greatly increase the speed as they become better acquainted with the use of the drill.

DRAKEWALLS UNITED.—M. Baden, Sept. 7: We have secured Mather's shaft to the shallow adit, and find that some slight damage has been done between this and the deep adit, which will take us two or three days more to complete. We have sent away for sale to-morrow about 9 1/2 tons of black tin, and for which we expect a good price; the amount I will wire to you. There is no alteration to report in the two points at the deep adit—that driving west from engine-shaft and east from Brenton's; they are both laying open ground, which we expect to take away at a profit to the company. I am pleased to say that this week we have taken on six more able miners, and hope quickly to get a larger number, whom we expect to stop in the pitwork until they are disposed to take their places on tributes, which is the system we would like to adopt throughout the mine if possible.

EAST BLUE HILLS.—S. Bennetts, W. K. Mitchell, Sept. 6: The lode in the 50 east remains much the same as last reported—worth about 77. per fm. In the 40 east end, so far, there is not that improvement we anticipated, the lode still being small, and not of much value.

EAST CRAYEN MOOR.—David Williams, Sept. 7: The 76 has been extended west upon the main lode 17 fms. from cross-cut, and is to-day 3 ft. wide, composed of limesparg, gossan, and lead ore, worth 20 cwt. per fathom, and is both wider and richer for ore than in the 54 above at the corresponding distance from shaft. A stope in back of level in the lode 3 ft. wide, and producing 20 cwt. of lead ore per fathom; wrought at 80s. per ton of dressed ore. A winze sunk in the 54 is down 5 fms. 2 ft. in a lode 3 ft. wide, and producing 35 cwt. of lead ore per fathom. We have four tributes in back of level at an average price of 100s. per ton of dressed ore, and two stopes producing 30 cwt. of lead ore per fathom.

EAST DAREN.—Thos. Garland, Sept. 8: In the 80 end west the part carried for 5 ft. wide lode well, yielding 1 1/2 ton of lead ore per fathom. In the 80 east, on the No. 3 south branch, the lode is into a disordered piece of ground and unproductive, and at the end of the week we purpose to suspend driving any further. In the 60 end, west of Vaughan's winze, the lode is about 18 in. wide, and containing occasionally rich stones of lead ore, and beg to recommend this point be pushed forward by four men to reach over the productive ore

ground being worked in a stope over the (80) level under; at present yielding fully 1 1/2 ton of lead ore per fathom. The two stopes over the 92 will yield on an average 1 ton of lead ore per fathom. The machinery throughout is in excellent order, the drawing and dressing progressing satisfactorily, with an abundant supply of water from the continued heavy fall of rain. Samples of 20 tons of silver-lead ore were sent on Tuesday, the 29th ult., for sale on the 12th inst.

EAST LOVELL.—R. Quentrell and son, Sept. 6: The different points of operation are looking much the same as reported at the meeting last week. The lode in the 54 east of middle shaft on Roger's lode continues to be worth quite 154. per fathom, and is looking very well.

EAST UNY.—Wm. Hooper, Sept. 7: The lode at the engine-shaft, sinking below the 82, is 3 ft. wide, composed of quartz and peach, with some rich stones of grey copper ore. No. 1 stope, in back of the 82, on Davis's lode, is worth from 2 to 3 tons of copper ore per fm. No. 2 stope, in back of the 82, on Davis's lode, is worth 2 tons of copper ore per fm. The lode in the 40 west, on the great flat lode, is 6 ft. wide, producing a little tin. The lode in the 10, east of whim-shaft, is 3 ft. wide; the north part of the lode is saving work for tin.

EAST WHEAL LOVELL.—R. Quentrell, and Son, Sept. 6: The different points of operation are looking much the same as reported at the meeting last week. The lode in the 54, east of middle shaft, on Roger's lode, continues to be worth quite 154. per fathom, and is looking very well.

GLASGOW CARADON CONSOLS.—William Taylor, W. J. Taylor, Aug. 28: South Lode: The 114 east is worth full 104. per fathom; it has a very kind appearance with a south part which will fall into the lode soon, when we expect it will further improve. No change in the 114 west, producing stones of ore but not of much value. Harvey's lode at this level is improving out of the influence of the cross-course, now worth 54. per fathom. In the 102 west the lode is still broken up and disordered, ground rather hard. The winze in the bottom of this level is worth 71. per fathom. In the 90 west the lode is hardly looking so well, now worth about 54. per fathom. In the 90 west, north lode, improving; hope soon to get the same run of ore ground as in the stopes over and before this end. Winze come down before this level worth from 104. to 124. per fathom. The stopes throughout the mine are about the same as last reported, turning out some good ore varying in value from 104. to 154. per fathom. Everything in good working order and being pushed on with vigour.

GLASGOW ISSA (Merioneth).—J. Ferry, Sept. 7: There is no alteration to notice in the west stope; No. 1 shaft, since my last. We pass through the cruses from 20 to 24 tons of raw ore daily, taking it as it comes through and through. We have now sold to Messrs. Vivian and Sons 400 tons of copper ore altogether, for 16054., and have there now about 40 tons for sale. We have begun to send away ore of this month's raising. We are making very good profit. The last nine lots fetched 2674. 15s. 6d., the highest price being 74. 5s. the ton; average, 42. We crushed 600 tons of raw ore in the month of August.

GOODRICH LANE.—R. H. Vivian, Sept. 7: Good progress is being made in stopping east from shaft. Our prospects continue very encouraging. All along the bottom of the ground stopped the lode is worth 15 cwt. of lead and blende per fathom.

GOODEVERE.—R. Knott, Sept. 6: Higher Shaft: In the bottom end east the lode, I am pleased to inform you, is improving in size, with every indication of opening up a large and productive lode as we advance under the level above, where the lode is 8 ft. wide. I am hoping to meet with tin in paying quantities, which will at once bring the mine into a highly satisfactory position. In the stope in bottom of the drainage west, the lode is 2 1/2 ft. wide, producing good tinstuff. Good progress is still being made in sinking; the new shaft, the men we anticipate will complete their bargain by our next setting day, when we shall at once commence cross-cutting to intersect the different lodes, both north and south. The woodwork of tramway referred to in former reports is all laid down, and I hope the rail will soon be forthcoming.

GORSBDD AND MEHLLYN.—W. Edwards, Sept. 7: The 90 west level is improving; a getting well, with more spar and blende in it. I saw small spots of lead in the morning, expecting to sink a winze below the water out of the north and south vein. The tribute pitches are doing better this month.

GOGINAN.—J. Kitto and Son: The 40 fm. level is being driven east of the western shaft by a full set of men, assisted by the rock-drill, which, with the air-compressing machinery, works well, and enables us to make excellent progress in extending this point towards the shoot of silver-lead ore now being wrought at the 20, and which we hope to reach at this depth in about a month from this date. We are still driving on the side of the lode, which is the most favourable part for progress, and in so doing find the strata to be of the most congenial character for the production of ore, and where broken by the side of the level the lode looks strong and healthy, and shows very promising indications of being remuneratively productive. We are pleased to state the section of ore ground at the 20, alluded to in the foregoing, has hitherto proved quite equal to the estimated value, and looks promising to be increasingly productive in depth. We are, therefore, now cutting a piece of ground worth about 15 cwt. of silver-lead ore per fathom, preparatory to sinking a winze below this level for the most effectual trial and opening up of this part of the mine for stopping operations at a deeper point. Francis's shaft has been sunk 11 fathoms below the 60 fathom level; a pumping shaft has been fixed in the same, and a cross-cut just started towards the lode at the new 70 fathom level, which will be forced on to the desired object as fast as possible, but the driving will necessarily be slow for awhile, until the skip-road be fixed and the drawing arrangements completed to this level, which will be proceeded with immediately. The driving of the 60 west of Francis's shaft is being continued energetically, and the part of the lode taken by the level is well defined, of a promising character, and produces some kindly stones of silver-lead ore, interspersed with yellow copper ores, which in this mine are generally indicative of a course of ore being very near. Meanwhile, the greater part of the lode stands intact to the north of the level, the value of which we shall prove by cross-cuts hereafter, when the end will be more advanced.

GREAT HOLWY.—W. T. Harris, Sept. 7: Boswell's Shaft: In the 110 west the lode is 2 ft. wide in carbonate of lime; the country rock is becoming easier for progress, and water flows freely from the forebore, good indications of a more important change. In the 95 north the lode is 1 1/2 ft. wide, worth 1/2 ton of lead ore per fathom, and improving as extended. In the 80 west the lode is improving for blende, and occasional stones of lead are being met with in driving.—Level Engine-Shaft: In the 60 level east the cross-cut No. 8 has been communicated with the workings above, and good ventilation secured. Have also commenced driving east and west courses of the lode, which at present produces good quality lead and blende. In the 70 winze sinking below this level the ground is favourable for progress, and yielding a little blende. No. 6 stope in the bottom of this level is producing 10 cwt. of lead, and 1 ton of blende per fathom. The same value may be applied to No. 9, the stope west of winze.—Tribute: No. 1 pitch in the back of the 60 west is worth 15 cwt. of lead and 2 tons of blende per fathom. No. 2 pitch is worth 8 cwt. of lead, and 1 1/2 ton of blende per fathom. No. 3 pitch east is producing 1 1/2 ton of lead, and 1 1/2 ton of blende per fathom; looking well. No. 10 pitch is worth 8 cwt. of lead, and 1 ton of blende per fathom.—Brammock Shaft: No. 4 pitch in the back of the 60 east maintains the same value last reported—2 tons of lead, and 1 ton of blende per fathom. No. 6 pitch is worth 10 cwt. of lead, and 1 1/2 ton of blende per fathom. No. 7 pitch is yielding good stones of lead and a little blende.—Partridge Shaft: The pithead is now nearly completed. Have to-day started the engine, which works admirably. Shall at once begin to clear the workings and get tributers at work.—Eyre's Shaft: Are still employed cutting ground for bearers and cistern, &c., also clearing the 110 level north. Surface work and dressing proceeding with usual regularity. To-morrow we shall sample 35 tons of blende, and shall soon have a parcel of lead ready also.

GREAT WHEAL WORTHY.—Joseph Prisk, Sept. 6: We are making fair progress in clearing the footway shaft below the 14, which so far has required but little timber. To-day I find the sides broken, and in future it will require to be timbered nearly all round. I have made a minute inspection of the shallow level in the 90, at Carr's shaft, north and south, for the purpose of opening out ore ground in one direction, and of reaching the perpendicular line of the shaft in the other. This ground has been rich in ore above, and will, in all probability, prove highly productive in this level in the future.

GREEN HURTH.—J. Polglase, Aug. 31: Swan shaft is sunk 6 ft. since last report. The shaft is now in limestone mixed with teflap, worth 2 tons of lead per fathom. Bottom end north (No. 1) is now worth 2 tons of ore per fathom. Winze in the bottom of the lode in the 100 level, worth 2 tons of lead per fathom. Stope in back of bottom level worth 2 1/2 tons of ore per fathom.—South of Vipond's Sump: Stope in back of bottom level is worth 1 ton per fathom. Stope No. 3 in back of 30 is worth 10 cwt. per fathom. No. 4 stope in back of the 35 is worth 1 1/2 ton per fathom. Rise in back of 31 producing good stones of ore occasionally. No. 4 vein north is in disordered ground. We are making every effort to get the surface work forward.

GROGWINSON.—J. Kitto and Son, Sept. 4: The sinking of the new shaft below the 100 level is proceeding satisfactorily, and the rock in the present bottom of the shaft being favourable for progress, we hope to get it down sufficiently deep for driving out another level on the lode in about five or six weeks from this date. At the 12, west of the new shaft, we have just intersected No. 4 lode, which, as far as yet seen, contains a nice little vein of lead ore, and as the driving proceeds, particularly in a westerly direction, we hope and expect it will improve in value, and open out a piece of profitable ground for progress. The 12, west of the new shaft, the present value and prospects of the other parts of the mine now under operation are just as they have been for some time past, except some of the tribute pitches, which are not quite as productive as formerly. We have commenced preparations for introducing the rock-drill, which will be applied to driving the deep adit cross-cut north to prove the lode standing in that direction, and extending the deep adit east on No. 3 lode.

HERODSFOT.—P. Temby, G. A. Temby, Sept. 7: The new stopes in the bottom of the 160 north the lode for 5 fathoms in length is now worth from 35 to 40 cwt. of silver-lead ore per fathom, and appears to be improving in size and character as we are sinking deeper. The two stopes in the back of this level are worth in the aggregate 30 cwt. of silver-lead ore per fathom, and the lode in the rise over the 147 has improved, now worth from 15 to 18 cwt. of silver-lead ore per fathom. We have begun putting down a tramroad at the 175 level, and shall clear this to the end as soon as possible, and we consider that there is only a few fathoms more to drive to reach the rich course of ore gone down in

the 160 north. At the 215 we are timbering and preparing for opening new stopes south of No. 2 winze. Where the lode is standing it is worth from 12 to 15 cwt. of silver-lead ore per fathom, and the ground very cheaply worked. No. 1 stope, north of winze, is worth 15 cwt. of silver-lead ore per fathom. No. 2 stope, south of winze, is worth 10 cwt. of ore per fathom. No. 3 stope, north of No. 2 winze, is worth 15 cwt. of ore per fathom. New stopes in the bottom of 205 north is worth from 10 to 12 cwt. of ore per fathom. The lode in No. 3 winze south, sinking below the 205, is worth 18 cwt. of ore per fathom. We are still clearing the 117 south, and this week we reached the old footway, which is said to be near the cross-course, where we expect to find the end of ground standing whole. We are pleased to say since our last report everything throughout the mine has gone on very satisfactorily, and we are raising more ore for market than we have for some months past.

HINGTON DOWN.—Thomas Richards, Sept. 6: The engine-shaft has been sunk by nine men during the past week 2 ft. 6 in.; total depth below the 25, 9 fms. 1 ft. 2 in., and fair progress is still being made. The 25 east, by six men, has been driven 4 ft.; total distance from the shaft, 25 fms. 4 ft. The lode contains quartz, capel, muddle, &c., with some black and yellow copper ore. The cross-cut commenced a short time since at the 25, east of the shaft, towards the No. 2 lode, has been extended 3 ft. The ground in the present end is favourable. The 12 east, by four men, has been extended 2 ft.; total distance from the shaft, 46 fms. 4 ft. 8 in. The lode continues without change. The deep adit cross-cut, by four men, has been extended 3 ft.; total distance south of No. 2 lode, 25 fms. 3 ft. 10 in. The ground now in the end is easier for progress.

KILLIFRETH.—J. Michell, J. Tamblin, Sept. 7: Engine-Shaft: The lode in the 50 fm. level driving east is 3 ft. wide, producing some rich stones of tin, and letting out a large stream of water. In this level driving west the lode is 2 1/2 ft. wide, but unproductive. The lode in the 40 end east is 1 ft. wide, and looking promising for improvement. This level driving west is worth 204. per fathom. The stope in the back of this level, west of shaft, are worth 34. per fathom each. The stopes, east of shaft, are worth 154. and 204. per fathom respectively. A rise in the back of this level, east of cross-course, is worth 304. per fathom. There is nothing new in the 30 end east. A rise in the back just behind the end is worth 154. per fathom.—Hawkes' Shaft: We have not cut the lode east of the cross-course in the 30, yet expect to do so shortly. A stope in the bottom of this level, west of cross-course, is worth 204. per fathom. We have a large lode in the 20 end west producing a little tin. In this level driving east the lode is unproductive. A stope in the bottom of this level is worth 104. per fathom. The lode in the 10 end east is producing a little tin. Also the rise in the back of this level is producing a little tin, but not enough to value.

KIT HILL GREAT CONSOLS.—I. Richards, Sept. 7: The water having again considerably interfered with operations at the tunnel level, the men have again succeeded in driving 1 fm. 3 ft. during the week. In the north engine-shaft sinking below the 82 the lode is 2 1/2 ft. wide, composed of quartz and capel with wolfram and a little tin ore. In Griffin's winze in the bottom of the 62 west the lode is 4 ft. wide, of a promising character, and yielding a small quantity of tin ore. In the 62 east the lode is 3 ft. wide, yielding small quantities of muddle, wolfram, and tin ore. In the 48 east the lode is from 4 to 5 ft. wide, composed of capel, quartz, peach, prlan, and a little tin ore. The machinery throughout the mine is in good order, and working well.

LANGFORD SILVER AND COPPER.—R. Goldsworthy, Sept. 6: We sent down our drop-lift on Friday far enough to drain the 20, and I am pleased to say the water is now down 1 ft. below the back of the plat, and hope to have the water all out from that level before the end of the week.

LEAD ERA.—J. A. Ede, Sept. 7: The heading, west of the flat is again dropping to form another furrow. The ground looks very promising, and our progress in it this week has been satisfactory.

LIANDEGLA.—H. Hotchkiss, Sept. 6: The change of ground referred to in my last as having taken place in the bottom of the new shaft is that of a thin bed of loose grit mixed with limestone and spar; what is below this I cannot as yet say, as we have not yet cut through it; however, I like the appearance of the ground. In the 36 yards level we have been at work in the cross-cut this week, and yesterday came to firmer ground in top and bottom, between which is about 3 ft. of soft ground, so for a more speedy development of this, I have ordered the men to push on with a small drift in the soft ground.

LOVELL (THE).—J. Prisk, Sept. 6: The following progress has been made in the different points of operation since the general meeting:—Trial Shaft: This shaft has been cut down for 3 fms. above the 20 to the bottom of the level, pent-house put in, barrow-road cut, and sunk 2 1/2 fms. below the level; we have also put an additional balance-bob to the engine, put down a sinking-lift, and attached a line of rods to work the same to rods in the engine-shaft. The lode in the shaft below the 20 has not proved to be what I expected, I took the men from the 20 end west, and put them to drive north about midway between our two shafts, and by driving 3 fms. 1 ft. we have intersected what must be our main lode; it is 2 ft. wide, producing saving work for tin, and in a few days I shall be able to test its value; this part went off north from the regular footwall 6 ft. below the 10, and we have now discovered it on the 20; we shall be opening on it shortly, and I think it will turn to a good account. The 20 has been driven west of shaft about 5 fms., and the whole of the driving west of shaft is about 10 fms.; this we now discover has been driven on the wrong part of the lode, which we shall prove as we go west from the cross-cut. The cross-cut in the 10 has been extended north in all about 24 fms., and has intersected three lodes of a promising character, and all containing tin; we have driven west on No. 1 lode about 4 fms., and by dialling it will form a junction with the engine lode westward. No. 2 is a large, masterly lode, and has much the same appearance as the lode in the old mine at the shallow level, but owing to being so jointy and in flat layers it does not go above the back level, and only a small leader of floukan can be seen at the outcrop; we have sunk 4 ft. below the level here, and find the lode going down 4 ft. wide, producing good stones of tin, and improving as depth is attained; at present the sinking is suspended, owing the water being too much to contend against. No. 3 is about 20 fms. north of shaft, and is 4 ft. wide, containing tin throughout; we are at present driving west on its course, and find the whole width of the end will pay to treat for tin, and my opinion is as we advance westward it will improve. The 20 end cross-cut will be continued for the purpose of intersecting the three lodes referred to; they are the strongest and best-defined lodes in this part of the mine; the price for driving will be about 34. 10s. per fathom. I enlarge the prospects are much better than at the last meeting.

MELLANEAR.—John Gilbert, Sept. 6: There is nothing new in the 30 cross-cut, south of Gundry's shaft, but the ground continues favourable for driving. The 70 cross-cut, driving north from the main lode, is in a very congenial channel of kilias, but we have not yet discovered anything to notice. The lode in the 50, west of Gundry's shaft, on the south part, is 6 ft. wide, yielding 3 1/2 tons of ore per fathom. The winze sinking in bottom of this level is yielding 2 tons of ore per fathom. The rise in the back of the 100, west of shaft, is yielding some saving work for copper ore. The winze in bottom of the 100, east of shaft, is yielding 1 1/2 ton of ore per fm., but the ground is spare for sinking. In the 110, east of shaft, the lode is 5 ft. wide, yielding 2 tons of ore per fathom, and looking more promising. The lode in the 110, west of shaft, is 4 ft. wide, and yielding some saving work for copper ore. We have taken down some of the north part of the lode in the 130, east of shaft. The lode is now 5 ft. wide, and yielding 2 tons of ore per fathom. The rise in the back of this level is yielding 1 1/2 ton of ore per fathom. In the 90, driving east of the old engine-shaft, the lode is 3 ft. wide, yielding 1 1/2 ton of ore per fathom. The lode in the 110, east of shaft, is 2 1/2 ft. wide, yielding occasional stones of tin, and improving in appearance. In the 110, west of shaft, the lode is 2 ft. wide, but mixed with elvan and unproductive. The stopes are looking quite as well as usual.

MID-DEVON COPPER.—James Neill, Sept. 2: At A shaft the water is in for the 80, and underground machinery in good order. C shaft the water is in back of the 45 east worked by eight men and two boys. The large deposit of chlorite referred to in last week's report is not yet exhausted, and in the extreme end I find a little ore is now showing, and from its position and appearance I am expecting an improvement in the yield of ore; altogether the stope is now more productive than I have seen it for some weeks past, and the strata throughout is conducive for the production of ore. In the 50, east of shaft, north part of main lode driven by six men, 5 ft. There is no change in the character of strata, still highly mineralised and occasionally yields rich stones of yellow copper ore.

MONA.—T. F. Evans, Sept. 7: I have nothing new to report upon the condition of the tribute bargains, except that I trust the falling off in the quantity will be only temporary. As previously explained, we have opened out a considerable extent of tribute ground, which only awaits a proper preparation for systematic working in order to render it available for the production of increased returns of ore. The ventilation will, I have every reason to believe, be speedily effected, by the holing through from the 55 to the 70 (now working), thus securing a good draught of air throughout this portion of the mine. When this is effected, and the necessary arrangements made, an increased return of ore may with confidence be expected. In the Bluestone bargains things look so much better that I hope in a short time to be able to announce largely increased returns from places which may be worked with safety. The securing of certain parts of these workings has cost us a great amount of anxiety and money, but I have every reason to believe that the worst is now over, and that the railings of ore will begin to pay us for the outlay. In the trefwork bargains, driving bargain No. 1, in the 90, at Carr's shaft, north and south, for the purpose of opening out ore ground in one direction, and of reaching the perpendicular line of the shaft in the other. This ground has been rich in ore above, and will, in all probability, prove highly productive in this level in the future.

MONA CONSOLS.—Wm. Bowden, Sept. 4: With very great pleasure I send you my report of your mining property at Mona Consols. Having seen it both above and underground I bear testimony to its pleasing feature on the surface, and more so underground. In the winze now sinking there is a bed of blende, and more so copper ore; the lode is about 2 ft. wide, but appears to be prosperously widening downward, out of which Capt. Mitchell and I had some beautiful stones taken thickly set with rich ore.

MOSTYN CONSOLS.—J. Woolcock, Sept. 7: I have nothing new to report from underground this week; from what I said in my last report the same is applicable to each bargain, but with this exception—we have more water in the engine-shaft, but are able to overcome it with perfect ease. Cross-cut from engine-shaft is showing some spots

men are employed in stoping down the lode both ends of winze, which is throwing out some good lead stuff, which will pay well for working. All surface work is being pushed forward as fast as possible.

NEW TERRAS.—T. R. Pryor, Sept. 7: The ground in the engine-shaft is of a most congenial character for the production of tin, and also very favourable for sinking. I have broken some rich stones of tin from the breast of ground on the great western slope. The lode here is about 20 ft. wide; all good stamping work. Carpenters have been busy during the last few days making wheelbarrows and gates. We shall fix a double gate at the north entrance, so that we may bring in long pieces of timber or any long machinery without trouble. At the western entrance we shall only put up an ordinary sized gate, with a little side gate to come in or out without opening the large gate. We are also pushing on with the necessary buildings.

NEW TRUMPET CONSOLS.—R. Quentrell and Son, Sept. 7: Franchia's Lode: The lode in the 12, east of shaft, is looking very promising, and as it is letting out a quantity of water we are daily expecting an improvement. The 12 west is now yielding some tin stuff of fair quality.—Wheal Valls Lode: We have divided and cased Trevelthick shaft, and are now drawing from the bottom level with the new horse-wheel. We are now cutting plat, and shall next week be sinking the shaft, and shall resume the driving of the 12. The lode in the winze below the adit level is looking very well, and at present contains more tin than it has at any time since we have been sinking. There is no alteration to notice on the south lode.

NEW WHEAL PEEVOR.—W. T. White, Sept. 6: I cannot speak of any alteration in our bargains since last report. We are still driving the cross-cut north beyond the part of the lode recently cut, and I hope soon to inform you that we have cut a good lode in this direction.

NORTH BUSY.—J. James, Sept. 1: The ground in the 32 cross-cut, north from engine-shaft, is of the same favourable character, and I think we are nearing the lode, as there is letting out a little water. The 18 and has in the last few weeks been very spare for driving, but is now a little better.—Old Mine: We have let down the water in the old mine to the 41 ft. level, at Twinbarrow shaft. In the 30, east of flat-rod shaft, the lode has improved in the last 2 fms. driving, now worth 8s. per fathom—a very promising lode. We purpose driving another 3 fms., when we shall commence to put up a rise to the 10.

NORTH GREEN HUBB.—J. Polglase, Aug. 31: The deep adit cross-cut is letting out more water than usual, and the measures are dipping as if we were nearing something. The vein north-east is without change. The men have resumed the driving south from the shallow level cross-cut.

NORTH GROGWINION.—J. Kitto and Son, Sept. 2: During the past month the different operations necessary for the proper development of the mine have been continued with the usual regularity, and very satisfactory progress has been made throughout. The bottom, or 36, is being driven east and west of the new shaft on the course of the lode, which for some time past and until recently has been unsettled in its character, and yielded only small quantities of lead ore; but we are glad to state at present it shows signs of improvement, and at both these points produces some nice lead ore stuff for the dressing-floors, which leads us to expect soon to find it all that we can desire, both in its character and yield of ore. The 24 east has been driven only a short distance since our last report in consequence of the men having been engaged rising above this level near the forebreast to effect a communication with the winze below the 12, which piece of work having been successfully accomplished, has thoroughly ventilated the mine at this depth, and enabled us to resume driving advantageously, which we intend pushing on as fast as possible, with the expectation of soon entering the run of lead ore seen at the 12, and discovering new courses of productive oreground in the large and highly promising part of the property which lies before this end. In the present forebreast the lode is large, and produces some fine lumps of lead ore. The stope recently commenced above the 24 and 12 are yielding fair quantities of ore, considering the productive ground is rather short and our operations shallow. On Aug. 8 we sold to Messrs. E. C. Goodhart and Co. 25 tons of lead ore at 15s. per ton, and are busily engaged in preparing another parcel for the market.

NORTH HERODSFOT.—J. Trelease, Sept. 7: We have taken down the lode in the 117 to-day, it is still about 1 ft. 6 in. wide, and has again improved in the past week; it is now worth 12 cwt. of ore per fathom. The No. 1 stope at this level is yielding 10 cwt. of ore per fathom, and the No. 2 ditto 6 cwt. per fm. I have put the two men from the 80, in the No. 2 stope, at the 117. We have put in a round boulder with wheel, &c., to work the same, and have commenced to dress the slates, which will return a little in the future.

NORTH PENSTRUTHAL.—Stephen Davy, Sept. 7: The lode in the 120 is looking very promising as well as the other points.

OKEL TOR.—H. Bulford, J. Rodda, Sept. 7: The skiproad and plat is being pushed on with all speed, and we are making good progress; the stopes are generally improved from last week. Will send full report next week.

OLD GUNSLAKE.—W. Skewis, R. O. Seccombe, Sept. 6: Since last report we have taken down about 2½ tons of the lode, which we value at 20s. per fathom. We are again driving up the side of the lode, and hope to have a good piece to take down by next report.

PANDORA.—H. Nottingham, Sept. 7: New Lode, 45-Fm. Level: This level going south is not looking quite so well for lead. The lode in the middle of the forebreast is smaller, but the top and bottom of the end is looking well; worth 15 cwt. of lead to a fathom. The stope over this level and north of winze is looking very well; worth 2½ tons of lead and 2 tons of blende per cubic fathom. The stope south of winze is worth 1 ton of lead and 1 ton of blende to a fathom.

The 30-Fm. Level: The No. 3 stope south is not looking so well; worth ½ ton of lead and 15 cwt. of blende to a fathom.—Goldard's Lode: The stope in the back, north of No. 3 winze, is worth 1 ton of lead and 1 ton of blende, and the stope above this 15 cwt. of lead and 1 ton of blende.—Surface: Dressing and other surface work is progressing well, and the weather fine for out-door work this week.

PARYS COPPER CORPORATION.—T. Mitchell, Sept. 7: There has been no change in either of the points at the 90 since last reported upon. We purpose putting some 25 tons of lead ore on the cross-course on the Carreg-y-doli lode, where there is a chance of meeting with copper very shortly, and there is plenty of unwrought ground in this direction. The surface trial near the western part of the mine continues to show good strings of copper ore. The new crusher rolls have arrived, and we hope to get the ore ready for sampling next week.

PARKA CONSOLS.—William Hooper, Thomas Job, Sept. 4: We beg to hand you our fortnightly report of this mine. Our shaftmen have been continuing driving south on Neil's lode to the 60 level, the lode in the end is worth 2s. 10s. per fathom, but on Wednesday night last in driving our water greatly increased, and we have no doubt we are getting near the east and west lode. We find our present lift is not sufficient power to keep out the water, and are preparing as fast as possible to put in an 8 in. in the place of the present one. We hope to complete same by the end of another week. The north end at this level is worth 2s. 10s. per fathom. The tribute stope was set as follows: No. 1 stope, 3s., and let at 14s. in 14; No. 2 stope, 3s. 5s., and let at 10s. 6d. in the 14. No. 3 stope, 4s. 10s., and let at 5s. in the 14. We have let another new stope on tribute at 8s. in the 14, and the usual standard of 50s. At the 10 ft. level we have a pair of men driving south in Neil's lode, at 20s. per fathom, and stopping in the back of same at 14s. in the 14, the stope is worth 2s. 10s. per fathom. We are pleased to say our mine is looking very prosperous, and there is not another mine in Cornwall at such a shallow depth that will equal it. The entire length we have driven on Neil's lode, between 20 and 30 fathoms, has been worth about 4s. 10s. per fathom. Looking at the great improvement in this lode from the 10 to the 20, fully 50 per cent., we have no doubt when another 10 fathoms is put down every foot of ground will pay well for tributaries stopping at 8s. in 14. Tin in this mine is of the highest percentage in Cornwall. We should recommend another sink forthwith, and have no doubt when this is done we shall be able to make long and continuous returns of tin, when this mine will immediately go on the Dividend List.

PENHALLS.—S. Bennetts, J. Goynne, Sept. 6: The lode in the 70 east end is much as last noticed, producing low quality tin stuff. The north lode at the 60 is without change. The winze below the 55 is worth 13s. per fathom. The 40 west end is worth 25s. per fathom, and the winze below the 35 is worth 12s. per fathom.

PIONEER.—Sept. 5: Engine-Shaft: There is hardly any change in the 85 yard level east; the ground looks quite as well as when last reported, yielding good paying ore, and favourable for forming into a good rib of ore again. The wet weather has somewhat impeded our operations this last fortnight, otherwise we should have had a good sale of ore this time, but we expect to be able to improve our monthly sales from this out. The engine, pumps, and machinery are all in good running order, and doing their work admirably.

POLROSE.—W. Bennetts, Sept. 6: Last Saturday, the shaft being sunk to the 110, I reset the same to sink, by 12 men, to the 112, at 20s. per fathom. The lode in the western end of the shaft has lately been showing a little more tin, with occasional rich stones. In the eastern end the lode is fully 3 ft. wide, yielding good work for tin.

PRINCE OF WALES.—Stephen Roberts, Sept. 6: Setting Report: The 122 east set on Saturday last by six men at 11s. per fathom. They have now commenced to take down the lode, but as yet can see no change since last report. It is ½ ft. wide, and worth 20s. per fm. The 102 west set by six men, at 10s. per fathom. Lode still standing at the north. In the 90 west we have six men. Here, we think, we have already intersected a part of the cross-course, but we shall continue driving west till we get through the whole of it, then drive north on its course to reach the lode to the west of it. A stope in the back of this level to four men at 5s. per fathom. Lode 4½ ft. wide, worth 10s. per fathom for tin and copper. The 90 east set not set. No. 2 stope in back of this level to four men, at 5s. per fathom; lode at present worth 5s. We think this stope will much improve soon, as it is to be seen in the rise a little above it. No. 4 stope, to two men, at 5s. per fathom; lode 3 ft. wide, worth 8s. per fathom. Two tribute pitches in back of this level (90 east) to four men, each at 10s. in the 14. One in back of the 90 west to four men, at 10s. 6d. for tin and 13s. 4d. for copper. Back of the 55 west to two men, at 13s. 4d. in the 14.—Goodluck: Lode to two men at 5s. per fathom; lode 4 ft. wide, worth 9s. per fathom.

RUSSEL UNITED.—John Bray, Sept. 7: The lode in the 55, east of cross-course, is fully 3 ft. wide, with a leading part on the south wall 14 in. wide, producing small portions of copper ore and munda, and letting out more water—a very promising drive. No alterations in the ground in the cross-cut north at the 97. The men at Stephen's are making good progress in cutting down and putting back the timber in the new shaft.

SILVER HILL.—Geo. Rickard, Sept. 7: The ground in the forebreast continues of the same promising description for the production of mineral as before stated. Yesterday we passed through another small vein, consisting of white iron and quartz of a friable nature, containing beautiful looking cubes of rich quality copper ore; these are encouraging features, and lead me to expect that we cannot be far off intersecting the lode. The rise going up from the back of the eastern level on Wheal Brothers lode is reset, the takers to put in all necessary timber and to pay the usual underground costs. In the rise up 4 fms. 3 ft. the lode is 2½ ft. wide, composed of soft spar, white iron, and blonk, intermixed with sulphurous munda. I have found to-day some stones of white iron interpersed with silver-lead; very similar indications are seen in connection with valuable deposits of silver ores.

SINCLAIR.—W. Edwards, Sept. 7: We are still making good progress at this mine, the beds in the shaft are getting thicker; we have passed through one bed 6 ft. thick, the colour of the stone looks very promising. I am looking forward with the greatest confidence to cutting the lode rising to the 50 from the short cross-cut that we shall extend; the shaft is now nearly 49 yards deep, and every thing is working well. The cart road is nearly complete, and in cutting through a hillside to form this we found rich stones of lead ore.

SOUTH CONDUBROW.—Wm. Rich, Wm. Williams, H. King, Sept. 6: The rise in the back of the 93 east has intersected the lode, which is yielding saving

work for tin. The bottom of the 80 east is worth 18s. per fathom. The 80 end, east of King's, is in a strong kindly lode, but yields little or no tin to value. The stope in the back of the 80 east is worth 12s. per fathom. The 70 end, east of King's, is worth 12s. per fathom, and the stope in the back of this level is worth 12s. per fathom. We hope to communicate the winze below the 60 with the 70 in a few days, when we shall open good ground for stoping, and shall then resume driving the 60 end east. In the 50 east we have just passed through a cross-branch, which has disordered the lode for the time. The stope in the back of this level is worth 12s. per fathom. The 40 end east is worth 7s. per fathom, and the stope below this is worth 10s. per fathom. The 30 end, west of engine-shaft, is worth 15s. per fathom, and the 20 end west is also worth 15s. per fathom. There is nothing very new to report on at Marshall's shaft, or in the ends driving west from it to same. We have taken out one of the boilers at the stamping-engine to undergo extensive repairs; this is highly necessary, as the condensing water at the engine is very corrosive, and is doing great injury to the boilers. We are urging on these repairs as fast as possible, as we can scarcely keep the full number of stamp-heads going with the present limited boiler-power.

SOUTH DAREN.—Henry James, Sept. 7: The lode in the 120 east is 5 ft. wide, worth 1¼ ton of silver-lead ore per fm. In the same level west there is a joint crossing the lode. After we get a little from this point I expect the lode will open out good again. There is no change at any other part to call for remark.

SOUTH DEVON UNITED.—Wm. Hooper, Sept. 7: The lode in the 110, east of Brook engine-shaft, is 5 ft. wide, composed of spar, munda, and copper ore; worth fully 8s. per fathom. The character of the lode is all that can be desired for the production of large quantities of ore, and seeing the lode has become more defined here than at the 100 over this point I fully anticipate of making good discoveries. The stope in the back of this level are yielding very small quantities of ore.—No. 1 s. 2 10s., and No. 3 s. 9s. per fathom. The lode in the rise in the back of the 80, against Martin's shaft, is 4 ft. wide, of a very promising character, producing saving work for copper ore. The ground is much the same as for some time past. Water is coming very freely from the lode, and we expect immediately the lode is cut in Martin's shaft the water will be entirely drained by the rise; this is being pushed on as fast as possible. The stope in the back of the 80 are worth—No. 1 s. 8s., No. 2 7s., No. 3 7s. per fathom. The lode in the adit level, west of old sump shaft, is of much the same character as for some time past, having a very fine appearance, and fully warrants the driving of deeper levels under this mass of gossan, which cannot fall as hitherto in producing large quantities of ore.—Pickstone's Shaft: The sinking here has been very satisfactory during the past week. Our measuring and setting day on Saturday. The exact depth shall be given you next week.—Martin's Shaft: Satisfactory progress has been made here since the starting of the engine which I am pleased to say is working very well indeed.

SOUTH TOLCARE.—T. Angove, S. Arthur, Sept. 6: The sumpmen have completed their cut in cutting ground at the 70, which enables us to resume driving the end west. The lode in this end is 7 ft. wide, and worth 12s. per fathom. The 60 end east, lode large, is worth 8s. per fathom. The rise in back of 60 is communicated with the 50, thereby cutting out a valuable piece of ground for stoping. In the 50 end west the lode is worth 9s. per fathom. In the 50 end east the lode is worth 10s. per fathom. We have commenced a rise in the back of 50, west of shaft. In the 40 end east the lode is worth 8s. per fathom. The rise in back of 20 is producing stones of tin only. The wet weather has so impeded our progress that we shall not work the stamping-engine Saturday as anticipated.

WEST ORAVEN MOOR.—David Williams, Sept. 7: The main cross-cut from Blackhill adit level to reach successively the parallel lodes in the north part of our set has been extended during the past month 5 fms. The cross vein upon which we are driving is 1 ft. wide, carrying spar, gossan, with occasional stones of lead ore. A stope west of new Blackhill shaft, under Ashworth's workings, in a lode 3 ft. wide, and producing 25 cwt. of lead ore per fathom; wrought at 90s. per ton of ore. A stope in the back of level, at right angles with new east shaft, in a lode 2 ft. wide, and producing 12 cwt. of lead ore per fathom; wrought at 90s. per ton of ore. A stope in the back of the 36, east of new east shaft, in a lode 2 ft. wide, and producing 20 cwt. of lead ore per fathom; wrought at 80s. per ton of ore.

WEST CREBOR.—J. Andrews, Sept. 6: On Saturday last the engine-shaft was re-set to sink below the 50 by nine men, at 15s. per fm. The lode at the shaft is from 4 to 5 ft. wide, yielding some good arsenical munda and stones of copper ore. The 50 east was set to drive by two men, at 5s. 10s. per fm. The lode in the end is 2½ ft. wide, composed chiefly of quartz, capel, munda, and a little copper ore, but not enough to value. The 50 west to drive by two men, at 6s. per fm. The lode in the end is 2 ft. wide, yielding good stones of munda and copper ore, and looking very promising.

WEST DEVON GREAT CONSOLS.—G. Rowe, Sept. 6: We are busily engaged in cutting plat and driving the 36 both east and west of the engine-shaft, on the course of the lode, which is producing stones of munda and copper ore, and showing a very kindly appearance for improvements.

WEST GODOLPHIN.—T. Hodge, F. Hodge, Sept. 6: The following bargains were set on Friday last: The 80 west to two men at 4s. per fathom; worth 6s. per fathom. The 75 west to two men at 7s. per fathom, yielding occasional good stones of tin. The 70 east to two men at 6s. per fathom, producing low price tinstone. A winze below the 70 west to two men at 5s. per fathom; worth 5s. per fathom. The 60 west end is in a sparry lode, to two men at 8s. 3s. per fathom. The 50 west end to two men at 5s. per fathom; worth 6s. per fathom. The stope in bottom of level to six men at 4s. per fathom; worth 6s. per fathom. The back stope to eight men at 4s. per fathom; worth 14s. per ton. The 20 south cross-cut to two men at 6s. per fathom; worth 14s. per ton. The 20 south cross-cut to two men at 6s. per fathom; worth 14s. per ton. The 50 end to six men at 5s. per fathom. The lode here looks very promising; worth 5s. per fathom. A tribute pitch in the bottom of the 70 to four men at 5s. in 14; worth 20s. per fathom. A pitch in the back of said level to two men at 13s. 4d. in 14, to be paid 45s. per ton for black tin.

WEST HOLWAY.—R. Rowlands, Sept. 7: The new engine is being rapidly fixed. I expect to have steam up on Saturday, so that our progress has been excellent.

WEST KITTY.—Wm. Vivian, Sept. 5: I am glad to say we are getting into another run of tin in the 72 and 60 east—both ends are improving. The 60 east is worth 30s. per fathom, and the 72 is very much improved. We have not yet cut through the lode in the cross-cut at the 60. I never saw the mine looking so well, on the whole, as it is to-day.

WEST KITTY.—Wm. Vivian, Sept. 7: In the 72 driving east the lode is worth 10s. per fathom. In the 60 driving east the lode is worth 30s. per fathom. We have intersected the lode in the 60, south of engine-shaft; lode 4 ft. wide, worth 12s. per fathom. In the stope in the bottom of 72 the lode is worth 25s. per fathom. In the stope in the back of the 60 the lode is worth 25s. per fathom. On the whole, I consider the prospect of the mine never looked so well as at the present.

WEST POLBRENN.—Wm. Vivian, Sept. 7: In the 40, driving south, we are meeting with branches of spar and munda, containing a little tin. I think the main part of the lode is still further south, which I hope to intersect in a few days.

WEST WHEAL PEEVOR.—W. T. White, J. Pryor, Sept. 6: We are pushing on the sinking of the engine-shaft to the 60 fathom level will all speed, and we hope in a short time to be cross-cutting at that depth from the same for communication to the lode. The lode in the 60 fm. level, driving west of the main winze, is daily improving, both in size and quality; it is fully 5 ft. wide, and producing very fair quality work for tin, worth 12s. per fathom. We feel quite confident of opening up a splendid run of tin ground in this level, knowing it to be gone down in the bottom of the 48. We shall commence to sink the main winze below the 60 directly after our next survey-day; this is a very important point, and one we shall most vigorously proceed with, as at the 60 a very important junction takes place. The middle lode that has proved so productive at the 80 in Wheal Pevor will, we are certain of, form a junction with the main lode in about 20 fms. west of our eastern boundary, or about 6 or 7 fms. west of our main lode, and there is a bunch of tin in the back of this point, which we never failed of producing this at any other point where they have come together in Wheal Pevor. The lode in the 48 west is worth 25s. per fathom. The lode in the winze sinking behind this end is worth 35s. per fathom; this is a most promising feature for the 60 fathom level, coming west, as the ground which this winze is laying open is rich for tin; winze now down 2 fathoms. The lode in the back of the 48 fm. level, directly over this winze, is also very rich for tin. We have not yet reached the lode west of the cross-course, but the ground to-day in the cross-cut appears to be coming more west. Since our last report we have dilled this, and find the cross-course is 15½ ft. wide, and its direction is 53° west of north and east of south, and taking a parallel line with this in our drive of the cross-cut west of the same we have driven about 13 fms.; and judging from its influence on the other lodes of the district we have a few fathoms more yet to drive, but we feel quite sure of meeting with a productive lode, as the ground presents every indication of such being the case. We have risen in the back of the 35, which is up about 12 ft. in the last 24 hours, and is greatly improved of late, and is opening a good run of ground, the stuff making a produce of fully 1 cwt. of tin to the ton of stuff. At surface our operations are vigorously carried on, and we hope to be dressing the whole of our stuff next week. The mine we are pleased to say is opening up exceedingly well at every point.

WEST WHEAL TOLCARE.—John Gilbert, Sept. 7: The lode in the 105, west of Richard's shaft, is 6 ft. wide, and yielding 4 tons of very good copper ore per fathom. A very fine lode, and looking promising to continue. The ground is not quite so rough, and therefore a little better for driving. In the 85, driving west of shaft, the lode is 2 ft. wide, and yielding occasional stones of rich copper ore and letting out a good deal more water. All other places in the mine are looking quite as well as when last reported.

WHEAL CREBOR.—H. Phillips, Sept. 5: Setting Report: The 132 east to drive by six men, stent the month, at 10s. per fathom; the lode is without change. We have suspended the 132 west and put the men to rise against the 7 west to sink below the 120, and stent the month, at 12s. per fathom. The 7 west to sink below the 120, and stent the month, at 12s. per fathom. The lode is 13 in. wide, composed of munda and ore. The No. 1 winze to sink below the 120, west of shaft, by six men, to communicate with the rise, at 11s. per fathom. The lode is 1 ft. wide, with stones of munda and ore. We have cut water in the No. 2 winze sinking below the 120, east of shaft, so as to impede our progress for the present; we have, therefore, suspended it until the 132 east is further advanced, it will then be resumed at once. We have placed the 132 west to stop the bottom of the 120, west of winze, stent the month, at 5s. per fathom; the lode is 6 ft. wide, worth 5s. per fathom. The 108 east, to drive by two men, stent the month, at 8s. per fathom, also a bargain to clear the attic which has been accumulating in the level, at 3s. 10s. The lode is unproductive. The 108 cross-cut to drive north by six men, stent the month, at 8s. 10s. per fathom. The ground is harder for cutting, being intermixed with spar. To drive and stop the bottom of the 108, east of winze, by two men, stent the month, at 7s. 10s. per fathom. The lode is worth 30s. per fathom. To drive and stop the bottom of the 108, west of winze, by four men, stent the month, at 7s. 10s. per fathom. The lode is worth 20s. per fathom. To stop the back of the 98, by six men, stent the month, at 5s. per fathom. The lode is 6 ft. wide, worth 30s. per fathom. No. 2 stope in back of the 98, by four men, stent the month, at 3s. 5s. per fathom. The lode is 3 ft. wide, worth 15s. per fathom. To drive the 48 to cross-cut south, by four men, stent 6 ft. or cut the lode, at 8s. per fathom. Water is flowing from the forebreast, the lode may not be far south.

WHEAL FORTUNE.—R. W. Dowling, C. W. Philip, Sept. 7: No change to notice in the winze in the bottom of the 30, east of the engine-shaft. At Miss Bennetts' shaft, on Wheal Brothers lode, in the rise in the back of the 10, east of the shaft, during the past week we have broken down about 3½ cwt. of

silver ore. The branch is still producing good silver ore. We have this week sold 20 tons of good coppery munda.

WHEAL GEORGE.—C. Kneebone, Sept. 7: The ground in the deep adit is firmer the past week, still showing stones of ore, and of great promise; a continuance of this level will soon bring us to the rich lead ground, and I should recommend that it be regularly driven forward by four or six men.

WHEAL UNY.—Wm. Hamby, Wm. Prophet, James White, Sept. 7: Setting Report: Hind's engine-shaft to sink by nine men, at 30s. per fathom for the lift shaft, now down 5 ft. below the 182. The lode in the bottom of the shaft is of a very promising character, producing a little tin, but not to value. The 182 to drive east of Hind's shaft, by six men, at 6s. per fathom; lode worth 12s. per fm. The 182 to drive west by six men, at 6s. per fathom; lode full size of the end, producing low quality tin stuff. At this point we expect, however, soon to meet with the run of tin ground referred to in previous reports from the level above. The 172 to drive east by four men, at 4s. per fathom; lode worth 11s. per fathom. The No. 2 rise referred to last week in the back of this level is communicated with the 160; this has laid open a large section of stoping ground. The stope east of No. 1 rise, in the back of the above level is worth 10s. per fm.; stoping by four men, at 3s. per ton. The 172 to drive west by four men at 4s. per fm.; lode worth 22s. per fm. Rise in back of this level set to four men, at 5s. per fathom; 162, 182, and 20s. per fathom respectively; the average price for stoping 3s. 6d. per ton. The 180 west is worth 6s. per fathom. The lode in the stope in the back of the 160, east of Hind's, still maintains its size and value, worth 13s. per fathom; stoping by four men, at 4s. per ton. We have 11 pitches on tribute, at tributes varying from 9s. to 13s. 4d. in 12. Good progress is being made with the surface work. All the machinery in the mine is working well and in good condition.

WESTWICH.—J. Kitto and Son, Sept. 2: The driving of the western adit cross-cut south is being carried on uninterruptedly, and the excellent progress which has marked the advancement of this point in time past is fully maintained. The rock now being driven through is a compact clay-slate, in every way similar to that in which the most productive lodes of this district have been found, and from our intimate knowledge of this property and its surroundings we believe there is a good prospect of opening out a valuable mine in this direction.

YORK AND LANCASTER UNITED.—J. Borlase, Sept. 7: We have now about 3 fathoms more to sink (in the new shaft) to be as deep as the No. 2 sump. This I hope to complete and the Oxclose lode cut in about six weeks. When this is done it will unwater No. 2 sump, and lay open hundreds of tons of lead and galamine from present indications. The barytes lode is not quite so large in the bottom of the shaft as it has been, but there is a leader of lead the whole length of the shaft on the footwall of the lode. The adit end is still producing lead and barytes for the part we are carrying. To-morrow we intend opening the end to ascertain the full size of the lode.

WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS,
MINEOWNERS STOCK AND SHARE DEALERS, &c.
1, ST MICHAEL'S ALLEY CORNHILL, LONDON

We referred last week to an article (in an evening paper) which had alarmed some people by the assertion that for the last 15 years the production of copper, lead, and silver had been steadily decreasing; and that this result had nothing to do with the depression of trade, for the decrease had been steady and uninterrupted for the last 15 years, which included a period of marked prosperity; and therefore, added the writer, "the fact simply remains that the mines are rapidly approaching exhaustion, and if the decline continues, and there is nothing to indicate a hope of revival, another period of 15 years will see us nearly at the end of our mineral resources." How long is it ago since we were startled by the announcement that our coal supply would only last a certain time? In regard to the metals in question, it is perfectly notorious that for some years past outputs have been reduced, and in many cases mines have been suspended altogether, owing to the fall in the price of metals, and not from the want of supply. Lead ore may pay well to raise at 13s. per ton, but not at 8s.; copper at 6s., but not at 3s.; and in consequence only a few mines can work at any profit, or even without making losses until metals improve. Taking 15 years ago, we find that in the beginning of Sept., 1867, copper was 85s. per ton, has been down to a little over 60s., and now about 67s. Lead was then 19s. to 20s., now 14s. At the Cornish Ticketing on Sept. 5, 1867, the average price obtained for the ore sold was 6s. 2s. per ton. At the sale last week the average price obtained was 3s. 8s. 6d. Copper was then 14s. 4d. per unit, it has since been down to 9s., and is now about 10s. Lead ore at that time was 20s. to 25s. per ton for silver-lead, ordinary ore 12s. to 13s.; it is now 16s. to 17s. best, and ordinary ore has been 8s. to 9s. Anyone looking at these figures may see how impossible it has been to keep up large returns, or for many mines to work at all. Take the case of a copper mine worked at the moderate cost of 500l. a month, and capable of returning 100 tons per month. This at 6s. per ton would show a profit of 100l. a month, but at 3s. per ton a loss of 200l. a month. The same applies, and even in a stronger degree, to lead mines, where the dressing is so costly, and the fall of 4s. per ton has caused several mines to stop raising ore altogether. The Beaumont Mines supplied, if we are not mistaken, about 1-6th of all the lead raised in England, but owing to the unremunerative price, and the unwillingness of the Ecclesiastical Commissioners to reduce the royalties, the mines were suspended for some time. These circumstances alone will account for decrease in the returns, and if lead and copper go up, as we are led to expect, there will be greater activity in mining and increased production of minerals.

Cross-course probably in our next.

X.—We cannot answer this.

We have received the following from North Blue Hills:—"The deep adit has been explored about 60 fathoms, and it is evident from the ground stoped away that the old workers must have raised a considerable amount of tin from it. The present end appears to be disordered by a cross-course. From the ground left standing some good tin stuff has been broken, and it is expected that as soon as the debris and water are cleared tin can at once be raised. The end will then be driven in whole ground at a depth of 50 fms. from surface, which will lay open a large amount of stoping ground. This mine possesses the great advantage of a stream of water running through the sett, which will be available for returning the tin raised. Some few years since some rich tin was raised from the back of this lode near the surface, and some declare in advance of this present end, by a farmer who was working up some waste land." It would appear that this mine is likely to be as early a success as East Blue Hills.

Down to the 60 fm. level the ores at East Caradon were remarkably rich and variegated, like those of South Caradon, and some of the stuff that fetched 5s. per ton was like road dirt, with patches of black ore that looked like soot. This was sent to pile without dressing. From the 60 to the 70 levels the ore changed to yellow ore and began to fail.

Langford is now forked to the 20, and at this rate we shall soon see the bottom of the mine, which is very important.

At Carnarvon the points valued are worth 6 tons of rich copper ores per fathom.

At West Crebor the shaft has been set to sink below the 50 level by nine men; the lode in the shaft is 4 ft. to 5 ft. wide, with good arsenical munda and copper ore. This is of the same character as the lode in Crebor, the sinking will be watched with great interest, as a course of ore which may be met with any day would double the price of shares. The ends of the mine are also looking well.

There can be no doubt that the price of West Caradon shares has been kept down through the fear that if South Caradon stopped, West Caradon would have to exert steam-power, or stop also. Now we are of opinion that South Caradon will not stop; though the present company may cease to work it. And if it did, it would not be so serious an affair for West Caradon as it is generally supposed. At present West Caradon is drained 50 fathoms below the adit by South Caradon. Were South Caradon to stop (but as we said before we do not think it will), the water would come up to 17 fathoms below the adit. Now this adit in West Caradon is 38 fathoms deep from surface; add 17 to this, would give a depth of 55 fathoms unaffected in any way by South Caradon, and to be worked without steam. Moreover the discovery on Gilpin's lode worth 2 tons *in the adit*, and 34 tons per fathom in the back, is all above the adit, and in an extent of ground that cannot in any way be affected by South Caradon. The mine therefore ought at once to make profits, and we hope these remarks will remove from our correspondent's mind the fears as to South Caradon, even if that mine should stop.

TO THE METAL TRADE.

FOR COPPER, TIN, LEAD, &c., apply to—
MESSRS. PELLY, BOYLE, AND CO.,
 SWORN METAL BROKERS,
 ALLHALLOWS CHAMBERS, LOMBARD STREET, LONDON.
 (ESTABLISHED 1849.)

ORFORD NICKEL AND COPPER COMPANY,
 SMELTERS AND REFINERS OF COPPER.
THOS. J. POPE AND BROTHER, AGENTS,
 292, PEARL STREET, NEW YORK.

Copper Ore, Mattes, or Bullion purchased. Advances made on consignments for refining and sale.

MELTING and REFINING WORKS at BERGEN POINT, near NEW YORK
 OFFICES—292, PEARL STREET, NEW YORK.

JOHN G. EAST,
 NEWCASTLE-ON-TYNE.

BROKER FOR THE SALE OF PIG-LEAD, LEAD ORES,
 COPPER ORE, COBALT, MANGANESE, CARBONATE OF
 BARYTES. ESTABLISHED 1866.

HENRY NUTT AND CO.,
 No 57, BRISTOL ROAD, BIRMINGHAM
 PURCHASERS OF

LEAD ASHES, LEAD SLAGS, SULPHATE OF LEAD, TIN
 ASHES, TERNE ASHES, AND ALL REFUSE CON-
 TAINING TIN AND LEAD.

HENRY WIGGIN AND CO.,
 (LATE EVANS AND ASKIN),
 NICKEL AND COBALT REFINERS,
 BIRMINGHAM

GEO. G. BLACKWELL,
 26, CHAPEL STREET, LIVERPOOL,
 PURCHASER OF
 MANGANESE, ARSENIC, FLUOR-SPAR, WOLFRAM, BLENDE, CALA-
 MINE, CARBONATE AND SULPHATE OF BARYTES, ANTIMONY ORE,
 CHROME ORE, MAGNESITE, EMERY STONE, PUMICE STONE,
 OCHRES AND UMBERS, CHINA CLAY, LEAD ORE FOR POTTERS,
 TALC, PHOSPHATE OF LIME, &c.

S. A. EDWARDS AND CO.,
 METAL MERCHANTS AND BROKERS.

SOLE AGENTS FOR THE CELEBRATED SWEDISH STEEL,

BRANDED "SANDVIK."

6, GREAT CHARLES STREET, BIRMINGHAM.

OLD METALS OF EVERY DESCRIPTION PURCHASED for CASH.

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, SEPT. 8, 1882.

IRON.	£ s. d.	£ s. d.	TIN.	£ s. d.	£ s. d.
Pig, GMR, f.o.b., Clyde...	2 9 6	—	English, ingot, f.o.b., 100 lb...	100 0 0	—
Scotch, all No. 1...	2 11 0	—	Do, refined...	110 0 0	—
Bars, Welsh, f.o.b., Wales 5 12 6	5 15 0	—	Australian...	105 0 0	—
Do, in London...	6 2 6	5 0	Banco...	nom.	—
Do, Stafford...	7 5 0	—	Straits...	105 0 0	—
Do, in Tyne or Tees...	6 0 0	—	COPPER.		
Do, Swedish, London...	10 0 0	—	Tough cake and ingot...	71 0 0	72 0 0
Rails, Welsh, at works...	5 12 6	5 15 0	Best selected...	73 0 0	74 0 0
Do, in London...	9 0 0	—	Sheets and sheathing...	73 0 0	73 0 0
Patts, ship, in London...	9 0 0	—	Flat bottoms...	81 0 0	82 0 0
Hoops, ship, in London...	7 10 0	7 15 0	Wallaroo...	73 0 0	73 10 0
Nail rods, staff, in Lon.	7 0 0	—	Burra, or P.C.O...	72 0 0	—
STEEL.			Other brands...	65 0 0	68 0 0
English, spring...	12 0 0	18 0 0	Chilli bars, g.o.b...	63 5 0	63 10 0
Do, cast...	10 0 0	15 0 0	QUICKSILVER.		
Swedish, keg...	15 0 0	—	Flask, 75 lbs., war...	5 17 6	—
Do, fag, hem...	15 0 0	—	PHOSPHOR BRONZE.		
Rails, at works...	5 15 0	—	Alloys I, II, III, and IV...	£125 0 0	—
Light, at works...	7 2 6	—	Do, VI and VII...	140 0 0	—
LEAD.			Do, XI, Spl. bearing metal...	117 0 0	—
English, pig, common...	14 2 6	14 5 0	BRASS.		
Do, L.B...	14 7 6	14 10 0	Wire...	7 3/4 d.	—
Do, W.B...	14 15 0	15 0 0	Tubes...	9 1/2 d.	—
Do, sheet and bar...	15 2 6	—	Sheets...	7 3/4 d.	—
Do, red...	16 10 0	—	Yel. met. sheath. & sheets...	6 1/2 d.	—
Do, white...	19 10 0	21 10 0	TIN-PLATES.		
Do, patent shot...	17 0 0	—	Charcoal, 1st quality...	1 0 1 0	2 0
Do, at works...	13 7 6	14 0 0	Coke, 1st quality...	0 18 0	—
NICKEL.			2nd quality...	0 17 0	—
Metal, per owt...	15 0 0	16 0 0	Black...	per ton 15 0 0	—
Ore 10 percent, per ton...	0 25 0	0 30 0	Canada, Staff, or Gla...	12 0 0	—
SPELTER.			at Liverpool...	12 0 0	—
Silesian...	17 0 0	17 6 0	Black Taggers, 450 lb...	30 0 0	—
English Swansea...	17 10 0	—	14 x 10...	30 0 0	—
Do, cast...	15 0 0	21 0 0			

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 6s. per box more than 10 quoted above, and add 6s. for each X. To re-plates 2s. per box below tin-plates of similar brands.

REMARKS.—There is some slight improvement in the general state of the metal market, and taken on the whole, a fair amount of business has been transacted, and providing nothing unforeseen of an adverse character occurs in political or monetary affairs, there seems to be a very good chance of the immediate future trade continuing to expand, and in anticipation of this, support is given to the markets, and buying for speculative account has been made brisker. The expectation of a large autumn trade this year has for a long time been entertained, but these sanguine views were shaken to some extent a short while back on account of some few unfavourable features arising which momentary caused a little uneasiness, and induced holders to press sales, and thus weakened prices, but further consideration of the position of affairs has led to the belief that unnecessary concessions were being made in accepting reduced prices, and the strong legitimate influences have once again asserted themselves. One of the principal events to which the improved tone of this week may perhaps be ascribed is the continued increased favourable state of the iron market, because this being reckoned the leading market, the others invariably follow in a degree in the same course that the iron market is tending. The present state of the Scotch iron market is very satisfactory, and the Cleveland market is said to be most flourishing, and while we reserve for our remarks on iron the statistical figures for that metal, yet it may be well here to state that the enormous shipments and substantial reduction in stocks has placed that market in a much more promising condition than for a long time past.

There is, therefore, a general belief that in iron an extensive business will be transacted during the ensuing months, and if such proves to be the case, then it will doubtless bear an important influence upon other metals, and a general recovery may possibly ensue. We have on previous occasions brought before the notice of our readers the favourable effect the bountiful harvests of America are likely to produce, and now it is encouraging to note that the condition of the home crops is very fair and even better than what was expected a week or two back, and this will necessarily help to promote business and increase the legitimate demand. Of course, the great fear is lest further unfavourable influences of a monetary or political nature should arise, which might create an injurious effect upon the market, and upon these we do not propose to speculate, as their future is attended with too great an amount of uncertainty, and it must remain to be seen whether any unfavourable effect which might arise therefrom would be sufficient to check the development of trade, when so much exists to stimulate business, when the wants of the trade are daily increasing, and when a general desire prevails to enter into fresh contracts and augment the amount of business that is doing, to meet not only the ordinary requirements of the trade, but also for the speculative account.

COPPER.—This market has continued to be characterised by firmness, and for Chili bars slightly dearer rates are being quoted, prices for other descriptions being also strong, but without any notable change. The amount of business that is doing is but moderate, and the same feature which has for some time past been prominent in this market still prevails—a reluctance on the part of holders to press sales. Prices derive their support chiefly from the combined firmness of sellers in their quotations, they preferring to wait on, in the hope of realising more profitable rates later on, and as far as can now be seen there appears to be a good chance of their obtaining a better value for their copper, providing, of course, that future supplies are to no great extent increased. In the first place manufac-

turers at the present time are reported to be well off for orders, and the delays which often arise in delivering within the stipulated contract times is a pretty good evidence that such is the case, and consequently there is no immediate prospect of their accepting reduced rates—in fact, on the other hand, there is more likelihood of their pushing up quotations. Then, again, as the autumn progresses, a better business may be expected to be transacted with India, for generally at that time of the year business with that country is more or less brisk, so that manufacturers are hopeful of being able to keep their work in active employment for some time hence. These are features which tend to implant a good deal of tone to the market, and should any favourable feature arise, such, for instance, as light charters from Chili, buying might, perhaps, become very spirited.

IRON.—This market remains strong, and although business in London does not appear to be very brisk, yet at all the manufacturing centres the state of the trade is reported satisfactory, and the works are mostly said to be well off for employment. The prices of manufactured have not undergone much change, but at the same time they remain very firm, and buyers do not hesitate to pay current rates. The state of the pig-iron market appears to be in a very sound and healthy condition, particularly in the North of England and Scotland. The export keep very large and from week to week continue to be fully maintained, and these, in connection with other favourable features give a good deal of support to the market. Naturally the abandonment of the restrictive policy of the Scotch and Cleveland ironmasters during the last 12 months, caused some little adverse turn in prices, but this was of very short duration, and quotations have quickly rallied again, and the general expectation that no particular increase will be made in the production, and this has tended to encourage buying, and any repetition of such favourable figures as we are able to announce this week, both as regards the excellent shipments and the reduced visible stocks can hardly fail to give renewed cheerfulness to the market, to stimulate buying, and to cause prices to advance.

For makers' iron there is also a very good demand, and prices are likewise firm, and with regard to other descriptions the following returns from the various manufacturing centres will give an account of the present state of the market, as regards the demand, the prices that are being realised, and the prevailing feeling in the trade. The opening figure on the Glasgow warrant market last Monday was about 49s. 10d., from which it quickly advanced to 50s., and on Tuesday a good business was done between 49s. 11d. and 50s. 3d., closing, however, rather easier, while on Wednesday it remained very steady between 50s. and 50s. 1 1/4d. Yesterday transactions were recorded between 50s. and 49s. 10d., closing with buyers at 49s. 9 1/2d., while the market closes to-day at 49s. 8d. The shipments last week were 16,076 tons, against 13,795 tons for the same week of last year, or an increase of 2281 tons, and which makes the total shipments for the whole of this year 435,662 tons, against 393,315 tons for the similar period of last year, and 497,435 tons for the same time of 1880. The number of furnaces in blast remain at 109, and the total visible stock has been reduced to 629,575 tons, against 630,905 tons last week, or a decrease of 430 tons.

The imports of Middlesbrough pig-iron into Grangemouth last week were 4205 tons against 6505 tons for the same week of last year, or a decrease of 2300 tons, and which makes the total decrease for the whole of this year compared with last of 52,011 tons. Upon the Middlesbrough market a fairly steady tone prevails, and second-hand lots of No. 3 continue to rule at about 44s. The stocks in makers' hands having been reduced by about 22,000 tons strength has been given to the market, and a better tone has also been implanted by a general belief prevailing that the good shipments would continue to be maintained, those last month reaching the enormous total of 95,861 tons, while the exports for the last week were about 20,500 tons. The stock in Messrs. Connal and Co.'s yards has been further reduced by 1100 tons during the past week, and amounts to 115,881 tons. The reduction that was made in stocks in the Cleveland districts last month was no less than 21,842 tons. The ironmasters have held another meeting to consider the restriction question, but nothing decided has been arranged, although there seems some chance of a continuance of the curtailed production.

The manufactured trade keeps steady, and without variation, ship-plates being quoted at 67 1/2s., and bars and angles at 67 1/2s. per ton. The Wolverhampton market is still said to be firm, and prices steady, while in some cases prices of sheets and boiler-plates have advanced 5s. per ton. There is a rather better enquiry for pigs, medium native and Derbyshire hematites being most in request. Underquarties of native sorts are quoted from 40s., and all mines at 67s. 6d. per ton. The Birmingham market is reported animated, and enquiries for both crude and manufactured iron are plentiful. Buyers in some instances, however, are rather reluctant to make purchases at current rates, and in some few cases sellers have given way, and made slight concessions, but there are exceptional instances, and the market all round is reported to be firm, but without quotable alteration. The state of the market at Sheffield is very good, and activity prevails in the demand for armour-plates, ship plates, and railway material. In prices there is not much change, but firmness exists all round. There is a very fair business doing in Wales, and principal transactions being in rails. According to advices from New York of the 31st ult., there is a rather more limited demand for Scotch pigs, and prices are slightly lower, No. 1 Gartsherrie being quoted at \$25.50, and Eglinton at \$23. Old rails are also cheaper, and meet with but little demand, being quoted at \$29.50, while the present rate for scrap is \$28.

TIN.—During the past week this market has continued very active and prices have rapidly advanced, and the turnover from day to day continues to be upon an enormous scale. The actual position of the market keeps very favourable, and therefore it is not surprising that buying should remain spirited, although prices are not so much regulated by the merits of the market as by the action of the principal operators. There is, however, a great deal of interest existing in the advance of prices, and therefore great efforts may be expected to be put forward to push up prices. The official quotations from day to day show the course of the market, and although business has often been done at prices other than those quoted on the day, yet in them we have the tendency of the market, and the rapid advance shows what a strong upward feeling has prevailed. The price for foreign quoted on Monday was 105s. 10s. to 104s.; on Tuesday, 103s. 17s. 6d.; on Wednesday, 104s. 2s. 6d. to 104s. 12s. 6d.; yesterday, 105s. 2s. 6d. to 105s. 12s. 6d.; and the closing figure to-day is 105s. per ton. A public sale is announced to be held at Rotterdam on the 27th inst., when 23,890 slabs of Banca will be offered for disposal.

SPELTER.—A steady business has been done. We quote ordinaries at 17s. to 17s. 2s. 6d., and specials at 17s. 5s. to 17s. 7s. 6d.

LEAD is quiet. In Spanish there are buyers at 13s. 17s. 6d., and sellers at 14s., and in English buyers at 14s. 2s. 6d., and sellers at 14s. 5s.

STEEL.—The market remains steady with a moderate business doing.

TIN-PLATES.—The demand is rather quiet, but prices are firmly upheld.

QUICKSILVER.—The Board of Trade returns for August are:—

	1880.	1881.	1882.
Imports, August	891	600	1,278 bottles.
Jan.-Aug.	44,651	46,446	43,268
Exports, August	794	2,135	4,188
Jan.-Aug.	9,737	14,891	25,632

The exports during last month were very good, and the eight months show an average of about 3200, or at the rate of about 38,000 bottles per annum; so that the consumption is nearly equal to the supplies. This is satisfactory, but the large stock weighs heavily on the market. The importers' price remains 5s. 17s. 6d., and, excepting only an insignificant rise and fall of 1s. 3d., it has not varied from this since May 31. San Francisco is steady at 37c.; receipts there continue fair.

Very little change has taken place in the MINING SHARE MARKET since our last; quotations, with very few exceptions, remain about the same, and are only nominal. Mines actually dealt in have included Roman Gravel, Tankerville, Great Laxey, Tincroft, Killifreth, North Blue Hills, Langford, Wheel Crebor, West Basset, Cook's Kitchen, New Kitty, Wheel Basset, West Crebor, West Caradon, Bratsberg, and others.

TIN has been firmer, and although, as stated last week, the standards for ore were then put down 3s. per ton, the order for the reduction was soon afterwards cancelled by the smelters, and the standards remained unaltered until to-day, when an advance of 2s. per ton was announced. Blue Hills, 1 to 1 1/2; Carn Brea, 10 to 11; Cook's Kitchen, 42 to 43; Dolcoath, 74 to 75; East Blue Hills, 9s. to 11s.; East Pool, 53 to 54; Killifreth, 5 to 5 1/2; New Kitty, 2 1/2 to 12; North Blue Hills, 4s. to 5s.; South Condurrow, 9 to 9 1/2; Tincroft, 12 to 12 1/2; West Basset, 10 to 10 1/2; West Frances, 9 1/2 to 10.

East Lovell, 1 to 1 1/2; at the meeting the accounts for five months, charging costs to Aug. 5, showed a balance of 896l. 2s. 3d., and a call of 12s. 6d. per share was made. The tin sold (5 tons) realised 317l. 2s. 6d. The costs, including merchants' bills, were 1582l. 10s. 6d. The report states that the lode in the 54, east of middle shaft, had improved to 15l. per fm., is the best lode in the mine, and if it continues the returns will be increased. Drakewalls, 1 1/2 to 2; Kit Hill, 1 1/2 to 2; Tregembo, 3 1/2 to 3 1/2; West Peavor, 1 1/2 to 1 1/2; Wheel Agar, 1 1/2 to 1 1/2; Wheel Basset, 10 to 10 1/2; Wheel Jane, 1 1/2 to 1 1/2; Wheel Kitty (St. Agnes), 1 1/2 to 2 1/2; Wheel Peavor, 6 to 7; Wheel Uny, 5 to 5 1/2. South Frances, 11 to 11 1/2; at the meeting in Cornwall, on Thursday (particulars of which will be given next week), a call of 1s. 12s. 6d. per share (7112l.) was made. Wheel Grenville, 10 to 11; at the meeting here the accounts referred to last week were passed, and a dividend of 5s. per share declared. Goodevere, 1 1/2 to 1 1/2; Penhalls, 7s. 6d. to 10s.; Phoenix, 3 1/2 to 3 1/2; South Crofty, 11 1/2 to 12; Trevaunance, 2 1/2 to 2 1/2. West Kitty, 14 to 14 1/2; the 72 east is worth 10l. per fathom; the 60 east 30l. per fm. In the cross-cut in the 60, south of engine-shaft, the lode has been intersected 4 ft. wide, worth 12l. per fm. The stopes in back of the 72 are worth 50l. per fathom; in the 62, 25l. per fathom.

COPPER continues about the same, and only a moderate business

has been transacted in shares. Bedford United, 2 to 2 1/2; Carnarvon, 1 1/2 to 2; Devon Great Consols, 4 1/2 to 5 1/2; Devon Great United, 1 1/2 to 2; Gunnislake (Clitters), 3 1/2 to 3 1/2; Langford Copper, 7s. 6d. to 10s.; the mine is now in fork down to the 20. New Cook's Kitchen, 6 to 6 1/2; Parys Copper, 1 1/2 to 2; Prince of Wales, 6s. to 8s.; West Crebor, 7s. 6d. to 10s.; Wheel Crebor, 2 to 2 1/2; West Seton, 17 to 18; West Tolgus, 20 to 22; West Caradon, 1 1/2 to 2; at the meeting the accounts showed a balance of liabilities over assets of 5l. 9s. 10d., and a call of 6d. per share was made. The account does not take credit for 100 tons of ore, valued at 500l., the cost of which has been charged and paid. The ore sold in May, and credited, realised 500l. 11s. The report of the mine is very favourable, and the agent states that at no time since operations commenced has the mine looked so well. The points in operation are valued in the aggregate at 11 1/2 tons per fathom. New West Caradon, 2s. to 4s.; the accounts here showed a balance of assets over liabilities of 175l. 2s. 6d. and a call of 6d. per share was made. On Monday 17 tons of ore will be sampled. Devon Friendship, 4s. to 6s.; the aggregate value of the points in operation is 81l. 5s. per fathom. The agents estimate the available ore ground opened under the adit at 6000 fathoms, worth 7l. per fathom, and which can be made marketable when the machinery is ready. East Caradon, 1 1/2 to 2; Gawton, 8s. to 10s.; Mellanear, 4 1/2 to 5; Mona, 4 1/2 to 5; Mona Consols, 1 to 1 1/2; South Devon United, 1 1/2 to 2; West Devon, 5s. to 7s. 6d.

LEAD.—Very little business has been done in lead shares, and quotations are merely nominal. The Lisburne Mines directors declared and paid a dividend of 10s. per share on Monday. Vans are quoted 5 1/2 to 6; Roman Gravel, 8 1/2 to 9; Tankerville Consols, 5s. to 6s. Great Laxey have advanced owing to an improvement in the mine to 18, 18 1/2. East Chiverton, 1 1/2 to 1 1/2; Goddards, 1 to 1 1/2; Leadhills, 3 1/2 to 3 1/2; South Darren, 1 1/2 to 1; West Lisburne, 1 to 1 1/2; Pennant, 4 1/2 to 5; Gorseid, 2 1/2 to 3; West Holway, 1 1/2 to 1 1/2; Great Holway, 5 to 5 1/2; Sinclair, 1 to 1 1/2; Coed-y-Fedw, 1 to 1 1/2; Gwern-y-Mynydd, 1 1/2 to 1 1/2; D'Eresby Mountain, 1 to 1 1/2.

FOREIGN MINES.—Akankoo, 1 1/2 to 2; Alamillos, 1 1/2 to 2; Almada and Tinto, 1 1/2 to 2; Broadway, 1 1/2 to 2; Canadian Copper and Sulphur, 1 1/2 to 1 1/2. Cape Copper, 51 to 53; the directors have declared a dividend of 1l. per share, payable on Sept. 29. Chile, 1 1/2 to 2; Cootacovil, 1 1/2 to 2; Copiapo, 3 1/2 to 3 1/2; Devala Moya, 1 1/2 to 1 1/2; Devala Central, 1 1/2 to 1; Don Pedro, 1 1/2 to 1 1/2; Fortuna, 3 1/2 to 4; Frontino and Bolivia, 2 1/2 to 2 1/2; General Mining, 4 1/2 to 5; Hoover Hill, 1 1/2 to 2; Indian Consolidated, 1 1/2 to 2; Indian Glenrock, 1 1/2 to 1 1/2; Indian Phoenix, 1 1/2 to 1 1/2; Indian Trevelyan, 1 1/2 to 2.

Kapanga, 1 1/2 to 1; a telegram received this (Friday) afternoon, says:—"Since last message we have crushed 55 tons of quartz. The yield has been 224 ozs. of gold. I have sent you 60 ozs. of specimens via Suez Canal. Pumping 70." La Plata, 2 to 2 1/2; Linars, 3 1/2 to 4; Mason and Barry, to bearer, 17 1/2 to 18; Mysore Gold, 1 1/2 to 2; New Quebrada, 4 1/2 to 4 1/2; Nouveau Monde, 1 1/2 to 2; Ooregum, 1 1/2 to 2; Potosi, 1 1/2 to 2; Rhodes Reef, 1 to 1 1/2; Richmond, 8 to 8 1/2; Rio Tinto, registered bonds, 100 to 102; ditto, shares, 26 to 27; Ruby and Dunderberg, 2 to 2 1/2; South-East Wynad, 3 1/2 to 3 1/2; St. John del Rey, 140 to 160; Tambracherry, 1 1/2 to 1 1/2, x.d.; Wentworth Gold, 1 1/2 to 2; Wynaad Perseverance, 1 1/2 to 1.

Birdseye, 1 1/2 to 1 1/2; Organos Gold, 2 1/2 to 2 1/2; Panulcillo, 6 1/2 to 7. Bratsberg, 1 1/2 to 1 1/2; the monthly report shows that the various points in operation are valued in the aggregate at 405l.—ends, 51l.; stopes, 354l. Michipicoten, 1 1/2 to 1; Placerville, 1 to 1 1/2; Yuba, par to 1 1/2 prem.; Port Phillip, 3-16ths to 4; Tolima, 3 to 3 1/2; Colombian Gold, 1 1/2 to 2; Emma, 1 1/2 to 1 1/2.

The Market for Mine Shares on the Stock Exchange has displayed a decidedly better tone throughout the week, and not only has a considerable amount of business been transacted, but prices have become much firmer, even in those cases where no actual rise has taken place. The prospects of the copper, tin, and lead markets are regarded as brighter, and consequently an improved price for ores is anticipated. The Orifá Gold Mines, whose prospectus was published in last week's Journal, is stated to have had much more subscribed than was asked for. The letters of regret will be numerous. The Gold Amalgamating Company has had an excellent reception, especially in Ireland. During next week the process will be tested on the commercial scale at East Greenwich, where it is understood 100 tons of Indian ore will be treated by Mr. Readwin, under the direct supervision of those to whom the mineral belongs.

Our telegram from Cornwall this evening says:—"The Cornish smelters have to-day advanced the tin standards 2l. per ton during the past week. The Cornish mine share market has been rather dull, and transactions limited, although the tin market has much improved. The principal change in shares has been in Killifreth, which have dropped to 5 1/2, caused by market operations, although the mine continues to look well. At South Frances meeting to-day, the loss shown on four months' working was 6268l., increasing the debit balance to 7068l., a call of 32s. 6d. being made. It was explained that a large amount of the expense was exceptional. At Wheel Owles account to-day 16 weeks' costs were 3654l., against receipts of 4045l. The amount of tin sold was 68 tons, realising, less dues, 3979l.; balance against the mine of 5110l. Carn Brea, 10 1/2 to 11; Dolcoath, 74 1/2 to 75. East Pool, 50 to 53 1/2; Killifreth, 5 to 8; New Cook's Kitchen, 5 to 5 1/2; Crofty, 11 1/2 to 12; Tincroft, 12 to 12 1/2; West Kitty, 14 to 14 1/2; Agar, 17 1/2 to 18; Wheel Basset, 10 to 10 1/2.

In Indian Gold Mine Shares there has been great firmness all the week, and, although in some cases the quotations show a fractional decline, this should not be regarded as an actual form, since, for several weeks past, it has been by no means easy to obtain the nominal quotation upon attempting to sell, whilst current prices are closely in accordance with actual business. It is announced that Sir David Salomons, having gone abroad, has resigned the Chairmanship of the Devala Moya and Rhodes Reef Gold Mining Companies. He has been succeeded by General Light (director), and the vacancy at the board has been filled by the appointment of Mr. W. Hodding. With regard to Rhodes Reef the manager (Aug. 8) writes:—"We have completed the tramway from the new reef to the mill, and the No. 3 new tunnel is progressing satisfactorily, and is now in 75 ft. When the gear for which we have been delayed arrived we will soon have the mill running 20 heads, Chilian mills, buddles, furnaces, &c. The directors have also received the following telegram, dated 5th inst., from which it will be seen that the above-mentioned gearing has arrived:—"Buddle gear arrived. Will start mill next week. All things going well." The manager of Devala Moya (Aug. 8) writes:—"At Strathern the work is going on satisfactorily, both in the reef and at the mill. During the last three days, since the rain partially ceased, I have been putting in a cut where I had found some splendid specimens. The reef as far as we have opened it looks fair, and I should judge that the stone would go 2 ozs. to the ton. This cut is about 1 1/2 mile from Strathern mill. With regard to the Wentworth, a correspondent of the South India Observer (Aug. 5) says:—"Before closing, I may just as well mention that Cherambady promises soon to pick up the Devala Companies. The Wentworth is making admirable progress."

In Electric Light Companies' shares there has been no material alteration, but prices have been higher in the few transactions which have taken place. Several companies have held their statutory meetings during the week, and although sufficient time has not elapsed to enable them to show results, they appear to be in fair trim for establishing the businesses they have undertaken. The approaching winter is looked forward to with confidence, by the many shareholders in companies of this class.

Devon Great Consols, 5 to 5 1/2; the quantity of ore sampled for sale on Sept. 21 is 969 tons. The lode at the 115 east has been further cut into 4 ft., making altogether 8 ft., consisting of a large proportion of mundie and some copper ore of good quality. Kit Hill, 1 1/2 to 2; the various levels and winzes still continue without any important alteration. The distance driven at the Tunnel level has been 1 fm. 3 ft., operations having been again considerably interfered with by water.

Tresavean Mines, 9-16ths to 11ths; the six heads of stamps are going night and day stamping tinstuff from Caddy's lode above adit, which is producing a better average than was anticipated.

South Devon United, 1 1/2 to 1; the lode in the 110 fully maintains its size and value, and is more defined here than at the 100 over this point. Good progress is being made at Pickstone's and Martin's shafts. Portable engine working well.

Mounts Bay Consols, 1 1/2 to 2; Browne's lode, it is reported, has improved considerably at the 20, and has developed into a splendid copper lode, with rich tin capels, improving with depth.

Drakewalls United, 1 1/2 to 2; the driving of the deep adit, west of engine-shaft, progresses satisfactorily, and the agent reports he has

forwarded for sale about 9½ tons of tin, which is expected will realise a good price. All the stopes and pitches are yielding fair quantities of tin, and in a short time, on completion of the present drivages, it is believed that the returns from the mine will be considerably increased.

East Wheel Rose, ½ to ¾; it is reported that in addition to Middleton's and Innes' lode another one equally rich has been found in the south ground running through the sett upwards of half a mile.

At Old Gunnislake Mine a valuable discovery has been made near the great cross-course, and a large rock of stone has been sent to the office of the London representative.

Old Shepherds, ½ to ¾, and reported firm, with buying tendency. The engine is draining the water satisfactorily, and in a few weeks the large deposits of lead ore will be reached.

Kapanga, ½ to ¾; advices by telegram received this (Friday) afternoon give the report for the month:—"Since last message we have crushed 55 tons of quartz; the yield has been 22½ ozs. of gold. I have sent you 60 ozs. of specimens via Suez Canal; pumping 70." This, it is remarked, shows the splendid return of 4 ozs. of gold to the ton of quartz crushed, and when the water is clear from the 70 fathoms and miners can get at the quartz, much larger quantities will be crushed. This is the best return yet received from the mine, and it is impossible that the shares can be long obtained at a discount, the price being now ¾ to 1 on receipt of the telegram. Beyond all question, it is continued, the results of the past few months place this mine as one of great promise, as the continual improvement in the grade of ore indicates more richness as they sink deeper, and ere long (should these returns keep up in the 70, of which there appears no doubt) handsome dividends will be paid to the shareholders.

The West African Gold Field's directors have, it is announced, purchased the necessary machinery and stores for carrying on hydraulic gold mining operations on a scale never before heard of on the West Coast. Their engineer will leave Liverpool for the company's property, in charge of machinery and stores, on Sep. 16.

Cape Copper, 51 to 53; at their meeting on Wednesday the directors declared a dividend of 1½ per share, free of income tax, payable on Sept. 29 to shareholders on the books on Sept. 19.

Richmond, 8 to 8½; the usual telegram from the mines states that the week's run was \$22,000 from 483 tons of ore with one furnace. During the week the refinery produced doré bars to the value of \$25,000. The superintendent's weekly report (Aug. 14) states that the 1050 drift station in quartzite is progressing favourably.

Ruby and Dundenberg, 2 to 2½; new, 15-16 to 1 prem. The weekly report advises that rather harder ground had been met with in sinking the shaft, consequently only 8 ft. had been completed during the week, making 130 ft. altogether below the 700 ft. level. A drift will probably shortly be commenced at the bottom of the shaft. There is nothing particular to notice in the week's work at the other parts of the Dundenberg Mine. The work at the surface of the Home Ticket Mine is going on satisfactorily, the ore body being from 4 to 6 ft. wide. The shipments of ore from the two mines for the week were 26 tons.

Eureka (Nevada) Silver, ¾ to 1; the drift from the winze (150 ft level Bald Eagle) not showing the desired improvement work has been discontinued thereon (as intimated last week), and a new one started from the bottom of the stopes on the same level; only a short distance has yet been driven, and no ore has at present been encountered.

Lead Mine shares have been more in demand, and prices show an upward tendency. Roman Gravel, 8½ to 9½; there is no change since last report. Mine continues to look as well as ever. A full report will shortly be issued prior to the meeting to be held next month. Leadhills, 3½ to 3¾; the shares have been in demand owing, no doubt, to the fact that the mine is opening out well at all points.

Goginan, ¾ to 1; the manager's report to hand this week states that excellent progress is making in opening out new ground, and that this is greatly facilitated by the use of rock-drilling machinery which, driven by compressed air, works well at the 40 ft. level and effects a great saving of time. To expedite progress the level is being carried by the side of the lode, and the appearance of the ground is most satisfactory, so that important discoveries are expected when the time comes to put cross-cuts through the ore-bearing lode. The ore ground at the 20 maintains its value, and appears likely to prove much richer in depth, and it has, therefore, been decided to sink a winze with a view to open out more stoping ground. The yield is 15 to 20 cwt. of silver-lead per fathom. The work of extending the levels, opening out new ground, and sinking the shaft is stated to be going on rapidly, and with satisfactory results.

North Grogginnian, ¾ to 1; this mine has now entered the lead market, a sale of 25 tons having been made at 8½ 16s., and a further quantity is in course of preparation. The manager states that the mine continues to open satisfactorily, and that very good progress is making in all departments. The bottom level is being extended east and west in an improving lode, yielding lead and blende ores of very similar character to that produced by the neighbouring mines. The stopes in the upper levels are yielding well.

Frongoch, 1½ to 2½; all is reported to be going on well. The sales for August were 150 tons of blende and 50 tons of lead, and for the current month they will be 300 tons of blende. The report says that the ore ground at the 56 is yielding well for both lead and blende, and that there is every indication of this shoot of ore extending for a considerable distance both east and west in "whole ground," both ends at present containing a good paying lode.

Non-attention to customary details frequently produces as much unpleasantness as intentional neglect. A shareholder in East Wheel Rose, Old Shepherds, and Mounts Bay complains that the fact of no meetings having been called for the presentation of accounts has given rise to most damaging rumours being circulated as to the financial state of each mine. He adds that he has the fullest faith in the mines, which he believes are most valuable, but he would like to see the directors act strictly in accordance with established usage, and at once call a meeting or lay a state of accounts before the body of shareholders.

Mr. J. P. Gillett, of Messrs. Gillett and Co., bankers, Banbury, &c., has been elected a director of the Brush Midland Electric Light and Power Company (Limited).

With reference to the prospects of minerals and mining, Messrs. Wren and Co. (Sept. 8) write:—"During the past week the metal market has been fairly supported, and the tendency still points to a further advance in the price of minerals. Tin, copper, and iron are chiefly in request, which has caused an improvement in some of the good home mines, with rather an active demand for shares. We would call especial attention to some of the cheap Welsh copper mines, such as Carnarvon, Mona, Mona Consols, and Parys Mountain, all of which are much below their value, as the district is highly mineralised. It must be remembered that in the Island of Anglesea the mines there have produced upwards of 10,000,000 lbs. of copper in an undeveloped state, the monthly yield averaging about 600 to 700 tons of copper ore, besides bluestone, ochre, &c. With regard to foreign mines, there are some well worth the attention of investors. New Zealand Kapanga and Organos Gold are likely to have a further rise, the report of the latter just received being highly satisfactory. A few of the low priced Indian gold shares will in all probability see much higher quotations. As to other foreign mines, we are of opinion that Eureka Silver, San Pedro, and Nouveau Monde, will prove an excellent investment at present prices.

The directors of the Manitoba Mortgage and Investment Company have declared an interim dividend for the half-year ending June 30, at the rate of 6 per cent. per annum, payable on Sept. 19.

The council of foreign bondholders inform holders of bonds of the Turkish Debt that interest at the rate of 1 per cent. per annum, for the eight months ended Sept. 13, will be paid in London on both registered and unregistered bonds at the several agencies for the different loans.

Saramacca Pioneer Gold (of Dutch Guiana) sold, on Monday, to Messrs. Frisley and Abell 104½ ounces of gold, being the result of the working of the mine for July.

Petitions will be heard on Sept. 13 for the winding-up of the Agricultural and General Engineering Company, and the Newmarket Colliery, Brickworks, and Pottery Company.

INSURANCE SHARES have, according to this evening's report of Messrs. W. L. Webb and Co., of the Stock Exchange and Finch-lane, been dealt in as follows:—Atlas, 19½; Commercial Union, 23½; City of London Fire, 1¼ to 1½; City of London Marine Corporation, 1¼; Clerical, Medical, and General Life, 40½; Employers' Liability Association Corporation, 2½; Fire Insurance Association, 3½ to 3½; Guardian, 67; Indemnity Marine, 17; Law Fire, 17½; London and Provincial Fire, 7½; Marine, 25 to 27; Merchants' Marine, 1½; Ocean Marine, 7½ to 8; Royal Exchange, 42 to 44½; Phoenix, 29 to 33½; Rock Life, 8½; Standard Fire Office, 25½; Universal Marine, 7½.

GAS SHARES.—The principal business in these shares, according to this evening's report of Messrs. W. L. Webb and Co., of the Stock Exchange and Finch-lane, has been:—Cagliari Gas and Water, 22½; Continental Union, 25½ to 26; ditto New, 1869 to 1872, 17½ to 17½; European, 12½; ditto, 8½ to 9½; Gas Light and Coke, A (ordinary), 17½ to 17½; ditto B, 4 per cent. max., 79 to 79½; ditto C, 10 per cent. pref., 219½; ditto D, 10 per cent. pref., 217½; ditto H, 7 per cent. max., 131 to 133; ditto 4 per cent. Debenture Stock, 105; Imperial Continental, 155 to 156½; London, 213 to 215½; Monte Video, 13; Oriental, 6¼ to 6½; ditto new, 6½; Rio de Janeiro, 25½; South Metropolitan, A, 206; ditto B, 177 to 178.

TRAMWAYS.—The closing prices of this evening, as quoted by Mr.

W. Abbott, of Tokenhouse-yard, are given in tabular form in the last page of the Journal.

RAILWAY AND GENERAL MARKETS.—Referring to the course of business done to-day during official hours (11 to 3) Mr. Ferdinand R. Kirk, Birch-lane, writes:—"Opening: Mexican Ordinary Railway stock is still 145, which is equal to more than 22 for the old shares, the First Preference are 155, or 44 for the original shares. Just three years ago we wrote: "In our opinion Mexican Railway First Preference should now be bought at 8." Unified are 62, Mexican Bonds 25½, Peru 6 per cent. but 14½, after touching 16½. In mining shares there appears to be some demand for Mounts Bay, Old Shepherds, and East Wheel Rose. The two former are 6s. to 8s., and the latter ¾ to ¾. La Plata, 2 to 2½; Nouveau Monde, ¾ to ¾; Devon Friendship, 3s. 6d. to 4s. 6d.; Bratsberg, 1½ to 1¾; Wheel Grebor, 2 to 2½; Organos, 2½ to 3; Tankerville, 5s. to 7s.; Parys Corporation, 6s. to 8s.; Wheel Grenville, 10½ to 11; the dividend is 5s. per share. The tin standards are reported to have advanced 2½. Closing: A relapse has taken place in Mexican Railway stocks, especially in the Ordinary, which is down 1½. Trunk Thirds, after some fluctuations, are a shade higher.

FRIDAY EVENING.—Telegram: The Cornish smelters to-day advanced the standards 2½ per ton. The standards now are—common, 99s.; refined, 5½ per ton. Speaking at Wheal Owles account to-day, Mr. Borlase, M.P., said that speculations at home were preferable to those abroad. At home there was the security of the best Government the world had ever seen. Egyptian bondholders had never taken into account that although the Nile Valley was the most fertile country in the world it was under the blighting influence of Turkish rule.

NEW CALLAO.—The time for lodging an appeal in this case has expired, and counsel is of opinion that no special leave to appeal would be granted. It is understood that Mr. Attwood's affidavit, against the exclusion of the petition by Mr. Justice Chitty it was stated to be the intention of the petitioner to appeal, contained simply an opinion on the specimens of quartz exhibited, and even this the company were prepared to rebut by expert evidence, and by the sworn testimony of its assayer.

BRATSBERG.—The monthly report from the managers shows that the mines continue to look exceedingly well. The aggregate value of the points working is above 4000. The dressing of ore is going on satisfactorily. The bridge over the river is completed, and they have begun to build the loadings for the machinery. The cargoes of ore lately sold and those coming forward are part of the raisings of the company since they got possession of the property at the end of October last.

ORITA GOLD MINES.—Great confidence is evinced in the success of this company, and the shares we hear are being applied for many times over. The manner in which the company has been brought out without promotion or purchase money should certainly entitle the concern to the support it seems to have received.

OLD GUNNISLAKE.—A valuable discovery has been made near the great cross-course, which is adjacent to Gunnislake (Clitters) Mine, and has the same lodes. This mine was started with a view to reach the Bonny or Clitters lode west of the great cross-course. In driving the adit level they cut a lode 2 ft. wide of rich copper ore, which the agents value at over 20½ per fathom. Great importance is attached to this discovery, as all the known productive lodes in the district have made their riches on either side of this great cross-course. Gunnislake old mine made 300,000 lbs. above the 90 ft. level. Wheal Russell, and also Devon Great Consols, made their great riches near this cross-course; the latter mine being most rich at 20 fathoms from surface. Gunnislake (Clitters) Mine is returning about 1500½ per month from the Bonny lode alone, and there is no doubt that this lode will be equally productive in Old Gunnislake Mine. There are various other lodes in the sett which make the property a very valuable one.

OWEN VEAN AND TREGURTHA DOWNS MINES.—The work at these mines is rapidly advancing, and the building of the engine-house in a forward state. The various shops and offices are completed, and a considerable portion of the lighter parts of the 80-in. engine delivered. The remainder will follow in a few days. The engine and whim-shafts are timbered and secured, and the clearing of the adit level proceeding more expeditiously than was anticipated, and letting down a large quantity of water, which would else have to be pumped to surface. No efforts are being spared to have these mines in full working order in the quickest space of time compatible with due excellence in quality of the important work to be carried out.

EAST WHEEL ROSE.—Another lode, equally rich with Middleton's and Innes' lode, has just been intersected in the south part of the sett. It is in virgin ground, and has a run of upwards of half a mile east and west. The lode is said to be almost solid silver-lead, worth 2 tons to the fathom. It being so shallow (10 fms. level) the cost of bringing it to surface is infinitesimal, and the dressing being automatic, the profits will be enormous. Sufficient ore ground has now been opened on to ensure large returns for a considerable time. The engine is forking the mine rapidly, and every fortnight a new level is drained, adding another point for operation to the miners to break and raise ore.

TRESAVEAN MINES.—The ore above the adit level at Wheal Boys shaft is producing a higher percentage of tin than was previously anticipated, and this percentage is increasing with depth. Captain Prisk, of Phoenix and Wheal Lovell, has been appointed manager, and this has given a fillip to the markets independently of the increasing value of the various lodes. The engine is keeping the water at two strokes per minute, thus showing the drainage of the mine is a secondary consideration. Very shortly the main part of the mine will be available, when the quantity of copper and tin raised will be governed by the number of men employed to break it, for Capt. Prisk says it is practically inexhaustible.

WHEAL HONY AND TRELAUNY UNITED SILVER-LEAD.—These important mines are now forked to the 108, which is thoroughly clear of water from the end back 50 fms. towards Chippendale's drawing shaft, and, with the exception of one slight breakdown which can be quickly repaired, is also clear of stuff. Capt. William Hancock estimates that the shoot of rich ore, which in the fore-breach at the 88 is 3½ ft. wide and worth 1½ ton per fathom, is 13 fathoms ahead of the present end in the 108. Instructions have been given to drive this end with all speed with rock drills, and as the average distance driven per drill per week in the clay-slate of the Hony ground is about 3 fms., a large quantity of ground will be quickly opened out. The present 108 end is 1½ ft. wide, composed of capel, fluor-spar, and silver-lead. Of the 78 Capt. Hancock writes:—"The lode in 78 north is getting around more to the west, and carrying more capel. I think we shall have a productive lode here very shortly." The prospects of this company are regarded as undoubtedly sound, and the shares have been in demand at an advance this week.

POLCREBO TIN MINE, NEAR HELSTON.—This mine has been moving energetically for the past two months to test a statement made by several miners who worked in it about five years ago. That statement was as follows:—"A level was driven east of engine-shaft (which had been sunk 30 fms.) at the 17, when a cross-cut was put out 3 ft., and the main part of the lode cut, which was driven upon 50 fms. in length, worth 10½ per fathom for the whole distance. Another cross-cut, it was stated, was driven several fathoms west, and the same lode intersected and driven upon 6 fms., worth 25½ per fathom, and the end of equal value." The following telegram from Capt. W. H. Martin received to-day (Sept. 8) at the London office confirms the above statement:—"Williams and I have seen the lode to-day; tin there as reported; 7 fms. driven on it; splendid lode."

MOUNTS BAY CONSOLS.—The chief attraction at present is Sydney Cove (one of the three properties owned by this company). No less than seven tin lodes have been discovered in the north part of the mine, some of them having a run of over a mile in the sett, and all show a yield of tin exceeding the average of many of the best dividend paying mines in Cornwall. It is confidently stated that Sydney Cove is the best tin and copper property in England, and from present appearance this opinion is well grounded. The engine for driving 80 heads of stamps is being erected, and will be completed in a very short time. A sale of copper has been effected

during the past week, and the average price was nearly double that obtained for any other parcel in Cornwall.

DEVON FRIENDSHIP.—The aggregate value of the points at present being worked is upwards of 800. The agents estimate the ground opened under the adit and available for quick returns at 6000 fms., worth part 7½ 10s., and part full 8½ per fathom, which can be cheaply sent to market when the winding machinery and the second calciner are erected. A very important discovery of rich copper ore has been met with in the 30 fathom level below the adit, a fine specimen of which can be seen at the office.

CAPPER PASS AND SON, BRISTOL,

ARE BUYERS OF

LEAD ASHES SULPHATE OF LEAD, LEAD SLAGS, ANTIMONIAL LEAD, COPPER MATTE, TIN ASHES, &c. and DROSS or ORES containing COPPER, LEAD AND ANTIMONY.

MANSON, WOODS, AND CARTER,

AMERICAN MINING AND FINANCE AGENTS.

Commissions undertaken personally or by letter. Titles advised on, and certified abstracts obtained. Securities registered, and Dividends collected.

SPECIAL BUSINESS IN FIRST-CLASS MORTGAGE BONDS. Particulars on application.

BANKERS: LONDON AND COUNTY.

OFFICES: 36, KING WILLIAM STREET, CITY.

Agents for the New York "Mining Record."

ROBERT C. FISHER AND SON,

GENERAL, CONSULTING, AND MINING ENGINEERS

SWANSEA.

REPORT ON MINERAL PROPERTIES AND MINES, ADVISE ON ALL QUESTIONS OF THE WORKING AND MANAGEMENT OF MINES.

EDGAR JACKSON

(Associate Royal School Mines),

ANALYST AND ASSAYER.

Assays or Com. lute Analyses made of Copper, Silver, Lead, Zinc, Tin, and other Ores. ASSAYING TAUGHT.

106, QUEEN VICTORIA STREET, LONDON.

JOHN THOMAS, STOCK AND SHARE BROKER,

REDRUTH, CORNWALL.

Mines Inspected, and Advice given as to Purchase or Sale of Shares.

On the Mining Market over Twenty Years.

Telegraphic Address: "THOMAS, REDRUTH."

WANTED, FIFTY KILLFIRE TIN MINE SHARE

Sellers please state lowest price.

H. JONES, care of Mr. Pates, 326, High-street, Cheltenham.

MR. ALEXANDER DAVIDSON,

STOCK AND SHARE DEALER,

LEADENHALL HOUSE, 101, LEADENHALL STREET, LONDON, E.C.

SPECIAL NOTE.—Buyers should ascertain my price before going elsewhere. FOR SALE, the following, or any part. OFFERS CAN BE MADE:—

*200 Almada,	200 La Plata, £2 3s. 6d.	100 South Devon United.
*150 Bratsberg, 34s.	*200 Michipicoten, 17s. 6s.	40 Tamar Silver-Lead.
*40 Devon Great Consols.	*57 Mona (one lot).	200 Tankerville.
*230 Devon Friendship,	200 Parys Mountain, 7s. 6d.	70 Van.
4s. 3d.	200 Prince of Wales.	240 West Crebor.
150 Drakewalls, 9s. 9d.	*50 Phoenix United, £4½.	280 West Devon.
*270 East Blue Hills, 9s. 6d.	*50 Richmond.	50 Wheel Crebor.
*225 East Craven Moor.	40 Roman Gravel.	100 Wheel Hony and Tre-
200 Kit Hill.	210 Sortridge, 4s.	lawney.

* THESE ARE CHEAP SHARES, WORTH BUYING FOR A GOOD RISE. All these Mines are looking well, and at present prices shares should be bought.

SHARES WANTED FOR CASH.—250 Herodsfoot, 3s. 9d.; 100 Phoenix United, £3; 80 Organos, £2½; 280 Wheal Jane, 15s.

MR. GEORGE BUDGE, STOCK AND SHARE DEALER

9, GRACECHURCH STREET, LONDON, E.C. (Established 29 years)

ALL BUSINESS TRANSACTED FREE OF ANY CHARGE FOR COMMISSION.

Notice to Investors and Speculators. Mr. BUDGE has DEALINGS IN—

100 Alkankoo.	100 Herodsfoot.	100 South Condurow.
50 Bedford United.	25 Kingston Down.	50 South Devon.
50 Indian Consolidated.	100 Indian Consolidated.	50 South Penstruthal.
100 Carn Camborne.	50 Indian Phoenix.	50 South Tolarne.
150 Devon Friendship.	100 Javali.	100 Tankerville.
100 Devala Moyer.	60 Kit Hill.	60 Tolima A.
70 Drakewalls.	20 Lead Hills.	50 Trevaunance.
100 Exchequer.	100 Langford.	100 West Caradon.
100 East Blue Hills.	25 New Kitty.	10 West Kitty.
50 East Caradon.	65 North Blue Hills.	50 West Polbreon.
100 East Nevada.	100 New West Caradon.	40 West Godolphin.
50 Gawton.	30 Organos.	100 West Crebor.
60 Glenroy.	20 Penhalls.	120 Wheel Coates.
100 Gold Coast.	100 Prince of Wales.	20 Wheel Uny.
50 Hoover Hill.	110 Potosi.	

SPECIAL BUSINESS IN Trevaunance United Mines shares. See report in last week's Journal. The recent discovery is improving, turning out better than when last reported on. The piece of ground is extensive and most valuable.

MR. W. MARLBOROUGH, STOCK AND SHARE DEALER,

29, BISHOPSGATE STREET, LONDON, E.C. (Established 30 Years)

Can SELL the following SHARES at prices annexed:—

50 Almada, 13s.	100 Gunnislake (Clitters),	50 Parys Corpora., 8s.
30 Bedford Unit., £2 5	£3 12s. 6d.	50 Pestarena, 4s. 6d.
25 Bratsberg Cop., £1 16½	50 Herodsfoot, 4s. 3d.	30 ditto, 10 per cent.
75 Colombian Gold, 7s. 6	25 Kingston, 15s.	50 Potosi, 10s. 3d.
80 Chile Gold, 13s. 6d.	100 Indian Kingdom, 5s. 3d	10 Richmond, £2 5s.
50 Callao Bie., 5s. 6d.	75 Kapanga, 17s. 6d.	20 Ruby, £2 2s. 6d.
50 Colorado, £1 12s. 6d.	25 Leadhills, £2 5s.	100 Silver Peak, 5s.
75 Dev. Friendship, 4s. 3	50 La Plata, £2 3s.	100 South Devon, 15s. 3d.
25 Devon Gt. Uni., 8s. 9d.	15 London and Staff. Fire	50 Sortridge Con., 4s.
40 Drakewalls, 8s. 9d.	Insurance £37 paid	75 Tankerville, 6s.
80 Eberhardt, 9s.	offer wanted.	50 West Crebor, 9s. 6d.
50 East Blue Hills, 10s.	25 Mona Consols, 23s.	50 West Lisburne, 15s.
50 English-Australian	50 North Blue Hills, 4s. 3d	40 West Devon, 5s. 3d.
50 Gold, 7s.	50 Nouveau Monde, 7s. 6	10 West Kitty, £14½
50 ditto, pref., 22s. 6d.	25 New Kitty, £2 15s. 6d.	25 Wheel Crebor, £2 6 3
68 Gold Coast, 23s. 6d.	20 Organos Gold, £2 15	
100 Greys Brewery, off.w	50 Prince of Wales, 8s.	

Shares in Home, Foreign, and Colonial mines, bought and sold at net market prices, free of commission. Purchases for forward delivery at special prices on receipt of deposit of 20 per cent.

SPECIAL BUSINESS IN Indian gold mines, also in rails, trams, Egypt, Ottoman Banks, Turks, and Lombards, for cash or account on receipt of usual cover. BANKERS: ALLIANCE BANK (Limited).

SAMUEL JAMES, STOCK BROKER AND MINING

SHARE DEALER, 14, ANGEL COURT, LONDON, E.C.

Son of Capt. A. T. JAMES, late of South France, and other mines.

Member of the Redruth Mining Exchange.

OFFERS FOR SALE, all or part, of the following shares free of commission:—

20 Arendal.	60 Glenroy.	50 South France.
50 Bedford.	20 Grogginnian.	100 South Penstruthal.
25 Blue Hills.	55 Gunnislake (Clitters).	50 Tamar.
50 Bratsberg.	200 Herodsfoot.	100 Tankerville.
75 Camborne Veau.	25 Kingston Down.	10 Tincroft.
10 Carn Brea.	20 Killfirth.	20 Tin Hill.
5 Cook's Kitchen.	25 Kit Hill, 7s. 6d.	10 West Basset.
200 Cootacovill.	30 Langford.	10 West Frances.
100 Coates.	100 Morla Du.	20 West Kitty.
50 Devon Gt. Uni., 7s. 6d	20 Mysore Reef.	35 West Devon.
100 Devon Friendship.	25 New Kitty.	20 West Peevor.
100 D'Eresby Mountain.	50 North Blue.	50 West Polbreon.
10 Dolcoath.	100 Norway Copper.	5 West Seta.
30 Drakewalls.	500 Old Owjacombe.	5 Wheel Agar.
55 East Blue Hills.	100 Parys Copper.	15 Wheel Basset.
30 East Buller.	100 Penhalls.	10 Wheel Grenville.
30 East Chiverton.	50 Phoenix United.	25 Wheel Jane.
10 East Pool.	4 South Caradon.	10 Wheel Kitty (St.
100 East Roman Gravel.	23 South Condurow.	Agnes).
50 Eberhardt.	100 South Crebor.	50 Wheel Uny.
20 Frongoch.	10 South Crofty.	25 Wheel Crebor.
50 Gawton.	46 South Devon.	150 Wheel Sisters.

The present is a favourable opportunity to purchase low priced shares, and I strongly recommend their purchase.

S. JAMES is a buyer or seller of all Home and Foreign Mining shares at close market prices. Orders by letter or telegram promptly attended to. Speculative accounts not opened on any terms whatever.

W. TREGAY, MINING ENGINEER, REDRUTH,

(Established upwards of a Quarter of a Century)

ADVISES ON ALL MINING MATTERS.

Notices to Correspondents

*. Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

MEXICAN MINES.—Can any correspondent give me any information respecting the old Bolanos Silver Mine of Mexico. I believe that some years ago it was in the hands of a company.—J. T. E.

Received.—“Occasional Contributor” (St. Leonard’s): We will endeavour to obtain the particulars—“Y.”—“Shareholder” (Wassau, Gold Coast)—“J. P.”—“J. W. M.”—“W. H. P.” (Kirkcaldy)—“Old Reader” (Northampton)—“W. T. E.” (Faversham, Orange Free State)—“J. R. P.” (Rio)—“Minas” (Ouro Preto): We have not space at present for so lengthy a matter.—“J. F. O.” (East Wheel Rose): “Amateur” (York)—“Shareholder in several Companies” (Taunton): We cannot be responsible for the statements in brokers’ circulars. You should apply to the parties issuing them.—“G. H. P.” (Dublin)—“H. O.” (Sunderland)—“Shareholder” (Phoenix and West Phoenix United)—“Correspondent” (Yarmouth): A report from the agent appeared in last week’s Journal.—“Shareholder” (Oreogum)—“Shareholder” (North Wales Freehold).

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, SEPTEMBER 9, 1882.

MINING LEGISLATION, AND MINERS’ WAGES.

THE MINERS’ CONFERENCE AT MANCHESTER.

The National Miners’ Conference, which terminated its labours on Saturday last, after sitting for four days at Manchester, discussed several most important matters, some of which may be considered as of national importance. The inaugural address of the President, Mr. T. BURT, M.P., was of more than usual moderation, when compared with those of former chairmen on the occasion of similar gatherings, and he most emphatically condemned at starting the suggestion on the programme for a general strike on the part of the miners throughout the kingdom for an advance of wages, which he said was wild, chimerical, impracticable, and did not deserve a moment’s consideration from a body of sensible men. As to the restriction of labour he was just as strongly opposed, for he stated he had never been able to see his way to an artificial limitation of production with the object of increasing prices and wages, for if all workmen restricted production, and prices were increased, miners would then require higher wages to put them in the same position they now occupied. The views of the President with respect to wages and a strike on the part of the men were not endorsed by the majority of the delegates, who were in favour of the miners stopping work unless some concession was made in increasing the prices paid for the getting of coal. For that purpose a resolution was proposed by Mr. B. PICKARD, “That in the opinion of this Conference the time has come when the miners of the United Kingdom should demand an advance of wages, and that no effort be spared to obtain the same by Oct. 1, and that if the same cannot be obtained there should be a general stand of all the miners throughout the United Kingdom.” This was met with an amendment in favour of a regulation of labour, but after some discussion the motion of Mr. PICKARD was agreed to, it being left to each district to make its claim in the way it thought best. If the resolution is carried out to its logical conclusion it is evident there must be a strike on a large scale, with most disastrous results to the miners, and it may be to considerable bodies of workmen engaged in other industries. To those who have any knowledge of the coal trade it is evident that colliery owners are not in a position to advance wages for few of them are making any profit worth speaking of, and the majority are satisfied with carrying on without incurring any loss. But it must not be supposed that any action taken by the Miners’ Association throughout the country would have the effect of closing even a majority of the collieries, seeing that there are many thousands of men who are in no way connected with any of the Unions, and who would profit by any attempt made to stop the production of coal in any one district.

But there is another item that has been overlooked by those who are determined to attempt to raise wages by any means, and which may be called into requisition should a strike take place. When the price of coal went up and miners’ wages were so very high that the men would not work more than four days a week, or, in some instances, five, troops of farm and Irish labourers rushed into the coal districts, and in the course of a few months became tolerably expert miners, and worked so long as they were highly paid; but when wages came down to a low point a great many of them left the mines for open air employment. This is fully shown by the Government Returns, and from these we find that, whilst in 1874 there were 538,829 persons employed in and about the coal mines of Great Britain, in 1881 there were only 495,477. Here, notwithstanding the fact that there has been an increase of 30,692,984 tons of coal, we have a falling off in the number of persons employed in and about our mines of no less than 43,352. No doubt many thousands of these latter would again be ready to work at the coal face were the wages high, as they would of necessity be in the event of a strike. The men complain now that there are too many men working as miners, and this must have the effect of keeping down wages; but if the policy referred to at the Conference is carried out, then there must inevitably be a considerable increase in the number of coal miners in the kingdom, just what the associations have for years been trying to prevent. This simply means keeping wages down for a considerable time to come, so that the men, in looking at what really is a shadow, are losing the substance that must inevitably follow in the course of time by the decrease in the number of persons employed in our mines, seeing that the means of recruiting our colliery population from those who enter coal mines at an early age is becoming more restricted every year. Owing to the introduction of machinery, at no period were so few young persons employed in collieries in proportion to the number of adults; and as the nursery of former times is constantly decreasing, if things go on as they have been doing for a few years past, it follows that there will be a scarcity of colliers, which, of course, means an increase of wages. As all things come to the man who has the patience to wait, the miners, or those who act as their leaders and advisers, would do well to consider the facts we have brought under notice.

As regards the wages question Mr. BURT read a letter to the Conference on the depopulation of rural districts from Mr. JESSE COLLINGS, M.P., in which he stated affected the interests of the labouring classes, particularly miners, leading to a lowering of wages, and to meet this he had given notice in Parliament of a resolution to the effect that in order to increase the productiveness of the land, to arrest the decline of the rural population, and to promote the interests of the commercial industries of the country, provision should be made by Parliament to facilitate the acquirement by agricultural labourers, tenant farmers, and others of proprietary rights in agricultural land. The communication was referred to the business committee after the President had asked for the hearty support of the delegates on behalf of Mr. COLLINGS’ Bill. If such a Bill should pass we may then expect to find the miners asking Parliament to facilitate the acquirement by the working miner of proprietary rights in mines and the minerals as well. Some such thing at one time, we believe, was mooted, and one would think that the miners have as much right to the mines as the agricultural labourers have to the land on which they work.

A good deal of time was occupied in discussing the position and duties of mining officials and qualifications, and, singular to say, whilst it was considered necessary that persons holding subordinate positions, merely one remove from the working miners, should undergo an examination for the purpose of testing their fitness, nothing was said with respect to those who might be called upon to fill higher and more onerous posts. In this direction it was agreed that before any person acted in the capacity of an overman, deputy, or fireman he should undergo an examination as to his knowledge

of gases and general competency by some person or persons appointed for the purpose by Government. In contradistinction to this, the Conference decided that “every colliery or mine should be examined by a Government Inspector not less than once in every six months; and that, in order to carry this out, this Conference insists upon the appointment of practical miners as sub-inspectors.” Whilst the Conference considered it necessary that a deputy or fireman should undergo an examination as to his knowledge of gases, &c., nothing whatever was said as to the qualifications of sub-inspectors, only that they should be “practical miners.” No doubt there are good and sufficient reasons why the proposed sub-inspectors should not be subjected to any examination as to their knowledge of the causes of the circulation of air in mines, the general properties of aeriform fluids, the measurement of ventilation, and other technical details with which a person appointed to inspect a mine should be familiar with. But there were some proposals brought before the Conference that we think the miners ought to have conceded to them for their own safety. Very few will be disposed to disagree with the resolution prohibiting the use of powder in a mine or part of a mine where gas is given off or found to exist in such quantities as to be dangerous to the safety of the workmen. Nor can objection be taken to the placing of danger signals in all great mining centres in the kingdom for the purpose of making known such atmospheric changes as may affect the working of mines, although our mining engineers do not think they can be of much service, and look more to the ventilation being maintained up to the highest standard at all times.

The appointment of check-weighman has long been a grievance as it at present exists, and we certainly agree with the delegates at the Conference that the men should be allowed to appoint any person they pleased, seeing that they are now compelled to appoint a man who has worked at the same mine as he is to act as weighman. The Employers’ Liability Act has certainly not given satisfaction, and has led to a great deal of contention and strikes as well, and we do not believe that the amended Bill brought in by Mr. BURT and Mr. BROADHURST, by which neither workmen nor employers can contract themselves out of the Act will be opposed; and it is, therefore, likely to pass, and so do away with a great deal of annoyance for which there is no compensating advantage. But there were some other resolutions agreed to by the Conference that cannot be so kindly taken to. Amongst these is the demand for a Minister of Mines to attend to mining matters solely. This, we think, is asking a great deal too much, and more than is likely to be conceded; for other workmen, such as sailors and railway servants, whose employments are far more dangerous than those of miners, and whose annual list of killed, in proportion to the persons employed, are far heavier, might with equal if not more force ask that they should have a Minister specially appointed to look after their interests. It may, however, be said that at the meeting of the Associated Chambers of Commerce there is a proposal for the appointment of a Minister of Commerce, which is likely to meet with a good deal of support. Were such an appointment made it would no doubt meet the wishes of miners and others engaged in our great industries. The question of royalties was introduced at the Conference, with a view to having a Parliamentary enquiry on the subject, and one of the delegates said he believed the excessive royalties deprived miners of wages which they might otherwise receive. We believe that coal royalties in most districts run from 6d. to 10d. per ton, and therefore cannot be said to seriously affect the wages paid to miners, and no enquiry, we fancy, could break existing leases. We have touched upon the principal questions brought under the notice of the Conference, and whilst some of them are such as can be conceded there are others that appear to be impracticable. All of them, however, are dwarfed by that relating to the wages question and the strike which is threatened, the progress and result of which we shall watch with more than ordinary interest.

THE DEVELOPMENT OF IRELAND.

The notices which have appeared in the *Mining Journal* as to the want of proper railway facilities for the development of the mineral resources of Ireland are gradually directing public attention to the condition of that country. We have maintained, and proved by statistics, not only that there is ample scope for the profitable employment of almost any amount of capital in the construction of railways and the development of the mineral resources of the country, but these works, by giving permanent employment to the thousands of semi-starved peasantry, would do more for the pacification of that distracted country than any number of mere legislative enactments, however wisely framed or discreetly carried out. Fresh facts are almost daily coming to hand to prove that the crying want of Ireland is permanent and remunerative employment for its now, perforce, idle population, and this can only be given by developing its mines and staple manufactures, and providing adequate facilities for the transport of the products to seaports for shipment. Anyone who has the most superficial knowledge of Ireland knows fully well that its mineral resources are almost exhausted, and that the mountains and valleys of wealth lie dormant and profitless simply for the want of capital and railways—nay more, we make bold to say that Ireland will never be nationally prosperous until its mines and quarries are worked, and the whole country far more thickly “netted” with railways. Some of its districts, rich in minerals, are almost as destitute of railways as an African desert, and many instances may be cited where coal has to be carted a distance of over 20 miles before reaching any line of railway. Such starvation of railway facilities is, of course, almost prohibitory to the profitable working of the mines, nor can English capital be reasonably expected to be devoted to the development of the mineral resources in the absence of better railway accommodation. In all probability there will be a short autumnal Parliamentary session, and we sincerely trust that some true and “practical” friend of Ireland will from his seat in the House ask the Government to appoint a Royal Commission to investigate and report upon “The mineral resources and the staple industries of Ireland generally, with the view of granting better railway accommodation for their expansion.” Probably no opposition would be offered to such proposition, and it would unquestionably be the means of much good. It would direct the attention of English capitalists to a field for the legitimate development of almost any amount of capital with the certainty of ultimate profitable remuneration, and would show the Irish nation that the Government is solicitous for its material welfare and commercial prosperity. If such Royal Commission was struck we feel assured that it would be compelled to admit the necessity of national aid in railway and mining enterprise, and there can be no doubt that any amount of capital so expended would be usefully and profitably employed.

JOINT-STOCK COMPANIES.

An instructive and interesting document has just been laid before the public in the form of a Board of Trade Return of Joint-stock Companies registered in the past year, and the total number registered since the passing of the Act in the year 1862. The principle recognised in the formation of Joint-stock companies is that “Union is strength,” and probably the great commercial enterprises of the country and its ramifications in distant empires could not now be vigorously prosecuted without some such combination, such is the amount of capital required. Joint-stock companies or Limited Liability companies have undoubtedly quickened the national commercial pulse, and many a useful and gigantic enterprise has been carried through by this means which otherwise would lie undeveloped in the mind of the civil and mining engineer. The country is thus under a debt of gratitude to those who judiciously and discreetly promote such companies; but, on the other hand, it cannot be denied that they have swallowed up an enormous amount of capital in bubble companies which could have been far more profitably employed than in the attempt to float chimerical schemes and feeding lawyers. These Joint-stock or Limited Liability companies also often lead to the most ruinous consequences to private firms, often by unfair competition reducing the profit to the merest shadow, and rendering the prosecution of our staple manufactures unremunerative. Large num-

bers of instances could be quoted in which the promoters, the directors, and the manager and secretary have been the principal persons benefited; and unscrupulous managers have not sometimes hesitated to debit expenses to capital instead of revenue, for the mere purpose of swelling imaginary and temporary dividends. The simple fact of the matter is that these Joint-stock companies should be most closely watched, and their proceedings scrutinised. Those who have unemployed capital at command, and there is a large amount still in the country, should either make personal investigations or entrust their commissions to some well-known broker of professional repute and standing. These Limited Liability companies do not afford any criteria for judging of the sound permanent condition of the staple industries of the country. No sooner does trade revive than scores of companies are launched having no legitimate claims to public confidence, and they soon prove a vortex for the capital of the too-confiding shareholders. The mind stands aghast at the enormous amount of share capital represented by these Joint-stock companies since the registering was insisted upon by legislative enactment in 1862. We can form no adequate idea of the figures which the recently-issued Board of Trade Returns afford. Since the passing of 1862 Act no less than 18,201 companies have been registered, with a total share capital of no less than two billions, one hundred and forty nine millions, and ninety nine thousand pounds (2,149,299,000.) The mind cannot grasp the immensity of these figures. What an interesting problem it would be to ascertain, if it were possible, how much of this enormous capital had been legitimately and profitably employed, and how much wasted upon still-born enterprises and bubble schemes. The largest amount of capital asked for in any one year was in that of 1864, when 997 companies were registered, with a share capital of no less than two hundred and thirty seven millions of pounds—the exact figures being 237,247,000. The panic year of 1866 told with astonishing results in reference to these Joint-stock companies, only 479 companies, with a share capital of 31½ millions sterling, being then registered. There has been considerable fluctuation in the number of the companies and the share capital during the 20 years of registration—one singular feature being the smaller average amount of share capital subscribed for each company. Thus, in 1864, the nominal share capital of each company averaged 23,800, whilst last year (1881) it only averaged 13,400. There were, however, last year a larger number of companies registered than in any previous year—1581, but the share capital was only 210,772,000, as against 997 companies of 237,247,000, in 1864. Many of these Joint-stock or Limited Liability Companies are legitimate and profitable fields for the employment of capital. They afford vents for our surplus wealth, but they are not all El Dorados, nor are their working unattended with injury to fair legitimate private trading. In many instances they open up large spheres for commercial enterprise and fresh fields for speculation, and private firms often pick up many profitable crumbs of comfort from following in the wake, and which otherwise would never fall to their lot.

AUSTRALASIA, AND THE IRON TRADE.

We have directed attention from time to time to the importance of the Australasian colonies as an outlet for British railway iron. All the railways of the Australasian colonies are in the hands of the various Australasian Governments; hence no competing lines are allowed, and the capital expended is made to tell in the most effective manner. As population accumulates and as industry extends at the Antipodes there can be no doubt that Australian government railways will steadily increase in productivity; and even as it is, the revenue which they are already acquiring is by no means without importance. This will be seen when we state that the gross receipts of the railways of Victoria in 1881-2 amounted to 1,815,000, showing an increase of 267,474, as compared with 1880-1. The gross receipts of the New South Wales railways in 1881-2 were 1,459,684, the increase in this case being no less than 270,120. The railways of New Zealand acquired 884,000, in 1881-2, showing an advance of 48,000, as compared with 1880-1. The railway revenue of Queensland in 1881-2 was 371,000, or 83,000, in excess of the corresponding receipts of 1880-1. The railways of South Australia produced in 1881-2 a gross revenue of 442,764, or 6000, in excess of the corresponding revenue for 1880-1. Combining all the lines together we find that the aggregate revenue of 1881-2 was 5,008,354, showing an advance of 674,594, or 15½ per cent, as compared with 1880-1. These statistics will be perused with interest by the British iron trade. From a colonial governmental point of view they are of a decidedly satisfactory character, as they show that the railways undertaken by the various colonial administrations will, in all likelihood, relieve the colonial treasuries of any burthen of interest accruing on the debentures issued to provide for their construction. There seems, indeed, a strong probability that the Government railways of the various Australasian colonies will not only prove self-supporting, but that they will be available in reduction of the general taxation imposed upon the colonists.

While the railway revenue of the various Australasian colonies exhibits the remarkable buoyancy to which we have just called attention, the Australasian Governments are profiting from the remarkable cheapness of money in Europe. When the colony of Victoria first attempted the construction of railways some 30 years since it had to attach the severe interest of 6 per cent. per annum to the debentures which it issued in order to provide the necessary funds. But now we find New South Wales 4 per cents. at 102½, New Zealand 4 per cents. at 101, Queensland 4 per cents. at 98½, South Australian 4 per cents. at 101½, and Victorian 4 per cents. at 103½. In other words four of the five colonies can now raise money at 4 per cent. per annum, and, perhaps, even at a lower rate, while the fifth colony—Queensland—has nearly arrived at the same happy financial condition. We may, indeed, assert as a broad fact that while 6 per cent. per annum was the normal rate of Australasian Government railway debentures in 1852, the corresponding rate in 1882 has receded to 4 per cent. This is obviously a matter of no small importance. The cost of raising railway capital at the Antipodes is now one-third less than it was 30 years since, while the prospect of any new lines undertaken proving remunerative has become much more decided. Under such circumstances as these the work of railway construction at the Antipodes appears likely to proceed apace. The Australasian colonies enjoying profound internal tranquillity, and being in no way implicated in the strifes of Europe, present a secure and profitable field for the employment of the surplus capital of the parent land. The Australias also enjoy the blessings of representative government and free institutions; population is steadily accumulating in them, and great natural resources are awaiting development. Altogether it appears to us that our great Antipodean colonies are likely for some time to come to prove valuable clients of our iron trade.

STATUE TO THE LATE ALEXANDER MACDONALD, M.P.—At the Miners’ Conference held last week at Manchester, Mr. T. Burt, M.P., presiding, it was unanimously decided to entrust the execution of the above statue, which is to be of Sicilian marble, to Messrs. T. Whitehead and Sons, of Westminster, London, whose model was selected from amongst 24 in an open competition. The statue is to be 7 ft. in height, and will when executed be erected in front of the Miners’ Hall, Durham.

THE CHESHIRE SALT TRADE.—Manufacturers have determined to work no longer at a loss, and at their last meeting resolved unanimously on a further stoppage of pans. It was also agreed to offer the following list of prices:—Common salt, 11s.; butter salt, 12s. 6d.; Calcutta salt, 13s.; shute stove, 14s.; handed square, 17s.; best fishery, 14s.; seconds, 13s.; factory-fitted, 26s. 6d.; best Prussian rock, 6s.; picked lump, 9s. 6d.; ground rock (fine), 8s.; rough, 7s.; rough riddings, 6s. 6d.; and soiled agricultural, 7s. per cwt. A general determination to secure better prices for the coming chemical contracts was shown. The decrease of exportations to the present time as compared with last year amounts to 33,293 tons. In August we sent to the United States, 12,554 tons; British North America, 10,723; Prussia, 1836; Russia, 5714; West Indies and South America, 1197; Africa, 4316; East Indies, 39,999; British Isles, 3953; Holland

2414; Belgium, 2871. The chief falling off has been to the United States, Scotland, and Newcastle-on-Tyne. The latter are affected by the competition from Middlesbrough. The total amount shipped from the Mersey was 113,550 tons, against 114,036 in August, 1881. The whole shipments for the year amount to 791,182 tons, against 824,475 last year.

WINDING EXTRAORDINARY.—A remarkable instance of winding coal recently took place at No. 3 pit, Newlands, near Baillieston, belonging to Messrs. Dunn Brothers, Braehead Collieries, under the management of Mr. John Dunn, the practical partner of the firm, and the underground department is under the charge of Mr. Henry Nisbet. The depth of the pit is about 120 fathoms. The engines are coupled horizontal, 18 in. cylinders, 4 feet 6 inches stroke, and the quantity of tubs drawn from the shaft for one shift was 1865. The cages are double, holding two tubs abreast. For one hour's winding during the day there were drawn 240 tubs, giving an average for drawing, changing, &c., of 30 secs. for each "tow." The above quantity is coal only, so that including rubbish, &c., drawn during the shift, there were considerably over 1900 tubs brought to the bank. The average output is about 1600 tubs per day.

IRISH RAILWAY ENTERPRISE.—A narrow-gauge line of railway has just been laid by the Antrim Iron Ore Company to connect its mines at Dungannon, County Antrim, in the Glenravel district, with the Cusendall and Redbay Railway, which is said to be the cheapest line ever constructed. It is laid with steel rails throughout, is furnished with necessary sidings to enable the mining company to carry on their extensive traffic, and cost 1500*l.* per mile. This amount covers all charges, cost of land, permanent way, and construction. Mr. Collins, C.E., supervised the work, and Mr. Francis Quin, Belfast, was the contractor.

YORKSHIRE IRONMASTERS AND RAILWAY RATES.—A meeting of ironmasters and representatives of firms engaged in smelting, &c., was held at the King's Head Hotel, Barnsley, on Thursday, for the purpose of considering the question of the railway rates for coke, &c., between Durham and the North of England generally, and Frodingham and North Lincolnshire. Some years ago a large proportion of the coke used in North Lincolnshire was obtained from the North of England, but the quality of the South Yorkshire coke having been found all that could be desired, that district, favoured by the railway rate to North Lincolnshire as compared with the North of England, has obtained almost all the trade. In these circumstances those interested in the northern trade desire, if possible, to improve their position in regard to it.

GASEOUS FUEL.—Exception has been taken to that part of the address of Dr. Siemens relating to the production of gas for all purposes, household and for engines as well. In the puddling of iron it is admitted that gas is the most economical agent that can be employed and as a motive power for machinery its value is now fully recognised. The proposal, however, to have the gas manufactured at or in the bottom of mines and then passed on for a considerable distance the same as water now is, has been objected to on more than one ground. Mr. Lever objects not only on commercial but on other grounds as well, for he alludes to the by-products resulting from the production of lighting gas which would have to be drawn to the surface. But that gentleman overlooked the fact that by Dr. Siemens' gas producer the whole of the nature, so to speak, is extracted from the coal, so that there is very little residuum left. But it is stated that commercially speaking the gas could not be made to pay [and this is assumed, that no more gas would be obtained] on a ton of coal than is the case at the present time; but this is a great mistake. By Dr. Siemens' system it is estimated that a ton of coal would produce 40,000 cubic feet of gas, instead of about 10,000 feet obtained by existing companies, and with a much greater heating power. Dr. Siemens has estimated that the gas could be sold as low as 1*s.* per 1000 cubic feet. This may appear to be a very small sum to pay for so much heating power, but if we take a ton of Silkestone coal, which is most extensively used by gas companies, it would not cost more at the bottom of the pit than 7*s.* per ton, and if this produced gas for which 40*s.* would be paid, we should most certainly say that there would be a very large profit indeed, after making all due allowance for plant and pipes. At the present time coal sent from the West Riding of Yorkshire to London costs 9*s.* per ton in transit and for City dues, and this would be saved were the heating product of the coal, instead of the coal itself, sent to the Metropolis. Mr. Brown, of Birmingham, considers that the putting down of a plant for the making of gas at the bottom of a coal mine would be adding another element of danger to those already existing. But many of our mines are ventilated by means of furnaces, which now a few mining engineers consider the best system, preferring it to the fans. At the bottom of a pit, arched over as it is, there could be no danger whatever in having a plant inside moderate dimensions. In many of our mines, and those the most fiery, like the well-known Oaks, the bottom and the main roads are lighted with gas. We need scarcely say that Dr. Siemens has fully considered all the points raised, and as he only puts forth his views when they are fully matured we may be sure that he has fully entertained the points raised by Mr. Lever and Mr. Brown. Like every great novelty that is introduced there are always some persons, conscientiously no doubt, who take exception to what does not appear to them to be practicable; but we have frequently found that they have changed the opinions in the face of facts, sometimes startling, and we have every reason to believe that such will be the case with respect to the latest project of Dr. Siemens for supplying gas for all heating purposes instead of coal.

HYDRAULIC MOTOR.—In constructing an improved motor, operated by means of a fall or pressure of water, Mr. C. BURNETT, of Aucterader, Perthshire, employs a screw fixed on a shaft which passes through a tube and works in suitable bearings at either end; the shaft carries a driving pulley or gear for communicating motion. Water under pressure passing through the tube will revolve the screw and thereby communicate motion to the driving pulley or gearing; sufficient space must be left at the lower or escape end of the tube to allow the water to escape freely after it has passed the screw.

ENGLISH ENTERPRISE ON THE GOLD COAST.—VALUABLE DEPOSITS OF TIN.—Although a large amount of British capital has been subscribed for the development of the auriferous deposits of the Gold Coast, comparatively few of the capitalists who have provided the funds have more than an imperfect notion of the configuration of the country or of the relative position of the several districts in which are situated the mines they are interested in. Mr. Walker has, therefore, rendered them an important service in translating Mr. Dahse's interesting pamphlet—*The Gold Coast*. By Paulus Dahse. Translated from the German by Harry Bruce Walker. With map of the Gold Coast. Liverpool: W. Barton and Co., Canning-place—recently published at Bremen. Mr. Dahse is a thoroughly practical man, and, in addition to availing himself of all obtainable information and records, he has been careful to utilise all the facts and details which he collected during a three years' sojourn in the country. So much has been published in the *Mining Journal* concerning the auriferous deposits that it will suffice to refer those interested to the pamphlet, as containing an admirable résumé of what has been published on the subject; but there is another point worthy of special attention. On his journeys on the Gold Coast during the last three years Mr. Dahse carefully examined its geological formation, and took home various specimens, which were submitted to Prof. Gümbel, of the Royal School of Mines at Munich, and the results obtained by him were surprising. It appears that a true vein of pegmatite, with large white mica, some oligoclase feldspar, and rich sprinkling of the unique tinstone. Prof. Gümbel has found by experiment that 10 per cent. of the whole rock is tinstone, containing 78 per cent. of tin and 22 per cent. of oxygen; that is to say the rock is worth over 150 *lbs.* of tin to the ton, and he thinks it highly probable that the veins of tin ore extend thickly and widely into the mountains, and that numerous other veins may yet be found that will give similar proportions. When it is considered that other tin ore districts with only 3 per cent. of ore are worth working an idea may be formed of the importance of these

facts. Some further details concerning these tin deposits will be particularly interesting. The original German map chromolithographed by Wagner and Debes, of Leipzig, accompanies the pamphlet, which is in every respect worthy of careful perusal.

GEOLOGY AND MINING IN THE UNITED STATES OF COLOMBIA.

At the recent meeting of the British Association an interesting paper referring more especially to the geology and mining of the States of Cauca and Antioquia, was read by Mr. R. B. WHITE, of the Fronto and Bolivia Company. He remarked that the eastern and western chains of the Andes, which run from south to north through this region are distinct in their general characters. The eastern chain is almost all volcanic, whilst in the western there are no volcanoes north of the second degree, and the rest of the Cordillera is composed of granites, granitoid rocks, and diorites. The upheaval of the eastern chain has raised the strata of the cretaceous formation to a height of 8000 ft. above the sea level, but on the western slopes of the western range these strata are found only a few hundred feet above the sea, and are almost undisturbed. Eruptions of igneous rocks have taken place in all ages between these two chains of mountains, and the rocks of the valley of the River Cauca, which with its tributaries occupies the space enclosed by the two Cordilleras are altered, metamorphosed, and crystallised to an extraordinary degree. The formation of an immense number of metalliferous veins seem to be the natural result of this development of igneous rocks. The sedimentary strata are laurentian, silurian, jurassic, cretaceous, tertiary, and post tertiary. The cretaceous beds generally contain good coal, limestone, and iron ores. The post tertiary alluvium are nearly all auriferous, but although the upper beds have been worked the bed rock or old river channel has not yet been sought after.

Platinum, iridium, inolybdenum, copper, lead, and zinc, are found in workable quantities. Gold and silver are very abundant, and are the only metals mined for. It is not a fact that platinum has been ever found in a lode in Colombia, but Mr. White has recently found iridium in appreciable quantity in a gold lode in the State of Antioquia. Diamonds are known to exist. Rubies and sapphires of large size are to be found in abundance in the State of Cauca, but the natives have not tried to turn this wealth to account. The gold mining is very interesting. Besides being found in the alluvium it exists in lodes of all ages, from the basic granites up to a post cretaceous period. The formation of gold and silver lodes in most abundance takes place after the cretaceous period. In other countries the gold veins are usually confined to a limited range of rocks. The silurian is usually considered to be the principal formation for gold; but in Colombia it is of secondary importance, although no doubt a great part of the alluvial gold was derived from the denudations of the older rocks, which was effected upon the grandest scale imaginable. There is a great difference in the standard or fineness of the gold according to its age. The oldest gold is the best, and it is found ranging from 12 to 23½ carats fine. According to the age of the lodes different metals are predominant in their association with the gold. In the oldest lodes copper is most common, and in the newest lead is the principal companion of the previous metals.

With regard to the relative position of the zone of maximum richness Mr. White maintained that when pyrites and galena are plentiful in a well constituted auriferous lode it is generally found that the gold will rather increase than diminish in quantity as the workings deepen. But lodes which are not well mineralised are most often richest on the surface. Common arsenical pyrites is not a good companion for gold when it is not accompanied by other sulphides. Pyrites is a general companion of gold; but it is not every class of pyrites that is so, and lodes of different ages are characterised by different classes of pyrites. There are also several varieties of galena which are more or less favourable as associates of gold and silver. Gold is not found in combination with any metal except tellurium. Instances are found in which it would appear that when the pyrites in a gold lode has decomposed some gold has been dissolved by the permeating waters and has again been crystallised in the cavities of the quartz in a form distinct from that in which it existed previously. It is remarkable that a pyrites containing manganese is always a good matrix for gold. In some lodes there is evidence of the quartz having been formed first, and the metalliferous contents afterwards. Such lodes are very irregular in their yield. Carbonate of lime is a rare gangue for gold, but where it does occur it is very productive. The great variety of the lodes in Colombia enables the miner to acquire so many data for comparison that he is able to distinguish the trustworthy from the unreliable lodes with a certainty perhaps unknown in other countries. An interesting discussion followed the reading of the paper, in the course of which high opinions of its value were expressed.

METALLURGY OF NICKEL AND COBALT.

In a paper read before the Society of Chemical Industry at Manchester, and illustrated with a fine collection of specimens lent by Messrs. Wiggins and Co., Prof. Huntington remarked that an important feature in the recent progress of this branch of metallurgy is the rendering these metals malleable. In dealing with arsenical ores, Louyet's method is largely employed. For ores which do not contain arsenic the following method is said to be used:—The ore is first fused with iron pyrites, by which means the nickel is separated in the form of a sulphide. The regulus of mixed sulphides is next treated for the separation of iron and sulphur, much as in the same way as in the Swansea method of copper smelting—that is, by a series of calcinations and smeltings, the "metal," in some cases, being finally roasted in a fused state or treated with nitre to remove the last traces of iron. The remaining sulphur is then easily got rid of, and the more or less pure oxide of nickel thus obtained is reduced to the metallic state in the same way as in the wet process.

It was explained that this method is sometimes applied to the treatment of the New Caledonian ore, a silicate of nickel and magnesia, containing, on the average, 7 to 10 per cent. of nickel. This ore, which is very plentiful, is now, however, for the most part smelted on the spot, much in the same way that iron is treated, and the metal exported to this and other countries in the form of pigs, containing carbon and about 5 per cent. of silicon and occasionally a little antimony. The difference in cost for carriage between ore and pig amounts to about 20 per cent. The pig is refined without expense for arsenic by mixing with it a suitable proportion of arsenical ore. Hitherto nickel has only been used in alloy with other metals as a whitening agent. The reason of this is that it could not be obtained in a workable form. The metal resulting from the fusion of grain nickel is always wanting in malleability and ductility, behaving in a similar way to wrought-iron which has undergone fusion, and probably for a similar reason.

In 1879 Dr. Fleitmann succeeded in rendering nickel malleable by adding to it, whilst in a state of fusion, ½ per cent. of magnesium, introduced through a hole in the top of the crucible, a few lumps of charcoal having been previously added. In this way it is possible to produce malleable nickel, which can be welded to iron or steel at a white heat, and rolled into thin sheets without separation. Fleitmann failed to get the same results by the use of manganese, aluminium, or calcium. Mr. Alfred Smeaton Johnstone, of the firm of Messrs. Wiggins and Co., who had previously been experimenting with manganese, has, however, succeeded perfectly in rendering both nickel and cobalt malleable by means of manganese. Commercial manganese (about 95 per cent.) or any ferro-manganese may be used for the purpose, the presence of iron not destroying the malleability of the nickel or cobalt. Thus the analogy between the treatment of nickel and cobalt and of iron which has undergone fusion is perfect. The manganese is added a little at a time to the fused nickel or cobalt, which is kept well stirred during the time, and finally poured out into moulds when tranquil. The metal is considerably agitated by the escape of gas during the addition of the manganese. For most purposes the addition of 2 per cent. of metallic manganese is sufficient, but when the "maximum degree of malleability and ductility is required the quantity added may be increased to as much as 5 per cent., beyond which there is no gain

under ordinary circumstances. The manganese left in the nickel need not exceed about 2-10ths per cent.

Zinc can, Prof. Huntington went on to explain, be successfully alloyed with nickel by reducing their oxides in a state of admixture. By rapidly fusing the alloy thus obtained a tough, malleable, and ductile metal can be made. The melting point of nickel is too high to admit of zinc being introduced into it after the nickel is molten. The addition of 1-10 per cent. of magnesium is said to improve the working properties of this alloy. It is not likely that important applications will be long wanting for a metal possessing such valuable properties as malleable nickel, the price (about four shillings a pound) being comparatively low. Malleable nickel anodes are already being substituted for the old cast anodes. The former certainly have a great advantage in their uniformity of structure, which not only prevents to a great extent their being eaten away irregularly, but also avoids loss through secondary currents. The greater rarity and consequent higher price of cobalt precludes its general use in the metal state. It is, however, said to be used for electro-plating, the articles coated with it being sold as superior nickel plate.

In the course of the discussion which followed the reading of the paper, Mr. A. H. Allen, of Sheffield, remarked that some time since he paid a good deal of attention to the production of nickel from New Caledonian ore, and in those days we used to have the ore sent direct to England. The ore is now smelted out there, and imported to England as a regulus, and this practice has entirely disorganised a great many experiments made in England with the view of utilising the ore in particular ways. The plan which he adopted was to treat the ore with acid, sulphuric or hydrochloric, and, after separating the silica, to precipitate the iron by an equivalent amount of magnesia. The nickel was next thrown down as sulphide, by the combined reaction, with an equivalent of magnesia and sulphuretted hydrogen. The latter he generated by the action of the waste liquors, containing chloride or sulphate of magnesium upon soda waste. The process was independently arrived at, his object being at the time to utilise his waste magnesium solutions from the nickel precipitation, and he did not realise the full importance of the reaction.

STEEL FROM PYRITES RESIDUUM.

The importance of the manufacture of steel from the residuum of pyrites roasting furnaces will be readily understood when it is considered that in France, England, Belgium, and Germany upwards of 800,000 tons of pyrites are annually consumed, producing after roasting in the furnaces upwards of 525,000 tons of peroxide of iron, containing less than 1 per cent. of sulphur, which is valueless for the manufacture of chemicals, and which has hitherto been neglected by iron manufacturers on account of its friability, which causes it to fall to a very fine powder, and to obstruct the blast-furnace, and especially on account of the metalloids it contains, which render the iron brittle. By treating this residuum, however, according to the invention of Mr. CLEMENT MARTIN, of Blegberg-Montzen, Belgium, it constitutes a very rich iron ore. Mr. Martin is an analytical chemist of high reputation, so that it may be assumed that his invention is practicable. Its object is to utilise the iron contained in the said residuum by transforming it directly into steel of different degrees of carbonisation, and it consists of processes for the treatment, purification, and reduction of such residuum, which must be re-roasted if it contain more than 1 per cent. of sulphur. The residuum containing less than 1 per cent. of sulphur is reduced to powder; it is then placed upon sheet-iron plates, perforated with holes of about 1-25th of an inch in diameter, and is washed in a trunk or vessel mounted upon fixed or shaking tables, so as to enrich it, or it may be simply washed or cleansed in cases or tanks through which a stream of water is caused to flow so as to enrich the residuum by depriving it of its earthy parts and of those which are soluble in water.

The residuum or ore thus prepared is then mixed with coal or suitable carbonaceous matter in proportions varying according to the quantity of iron it contains, and the degree to which it is to be carbonised. To the mixture of ore or coal is then added very unctuous clay or lime or any other like material capable of forming a very fusible flux in proportions varying according to the physical state and the chemical nature of the ore. The mixture or mass thus obtained is moistened with water rendered alkaline or acid as required, and then is converted into blocks or cakes by being subjected to powerful hydraulic or other pressure in cylindrical or other moulds. The said blocks or cakes having been dried are introduced into a furnace hereinafter alluded to as the "calcinating and reducing furnace," in which they are for a suitable time exposed to the influence of heat and a reducing atmosphere. The iron contained in the said blocks or cakes under the influence of the elevated temperature in the calcinating and reducing furnace is reduced, a portion of the lime combines with the sulphur and phosphorus, whilst part of the unctuous clay agglutinates, and greatly hardens the mass, and increases its density, and part of the same are scorified with the gangue and lime, forming with them a most fusible scoria or slag, which is removed to the melting furnace, in which the next operation is effected. The next operation is carried on in a melting furnace, or other suitable apparatus, heated by ordinary fuel, or in which the fuel is gasified, and used in the state of gas. The said furnace or apparatus, the concave sole of which has been previously charged with the highly fusible scoria or slag produced in the calcinating and reducing furnace herebefore described, is heated to a bright red heat. The blocks or cakes also heated to a bright red heat are introduced into the bath of melted scoria or slag by means of a self-acting duct without any loss of heat, and sink into and are immersed in it by their own weight.

Under the influence of the elevated temperature of the furnace, from which free oxygen is excluded, the reduction of the iron is completed, whilst at the same time it is carbonised by means of the surplus coal which has not served for the reduction. The gangue forms with the lime and clay forming part of the blocks or cakes introduced into the bath a basic scoria or slag, which entirely covers the melted metal, and preserves it from oxidation, and owing to the silica it contains, and also to its chemical properties, it becomes a powerful agent of desulphuration and dephosphoration. When all the chemical reactions herebefore described, have been effected the operation is terminated, and the scoria or slag having been removed from the furnace the steel is run into suitable ingot moulds for use as required.

SELF-SUSTAINING HOISTS.—In a strong frame by which the machine is supported by a hook or otherwise, Mr. THOS. KING, of Birmingham, proposes to mount a vertical axis carrying a drum. At the top of the drum is a worm wheel, and the bottom of the drum has a flange. A worm carried by a horizontal axis working in bearings in the upper part of the frame engages with the worm wheel at the top of the drum. On one end of the axis carrying the worm a sprocket wheel is fixed the endless rope or chain by which the machine is worked passing over the sprocket wheel. The weight or article to be raised or lowered is suspended to a cord or chain which is coiled several times around the drum. By giving rotation to the drum by means of the endless rope or chain on the sprocket wheel the suspending cord or chain is coiled on the lower end of the drum and payed off the upper end and the suspended weight or article is raised or by motion of the drum in the contrary direction the weight or article is lowered. In order to guide the rope or chain on or off the lower end of the drum and to guide it from or to the upper end of the drum as well as to adjust the position of the coiled rope or chain on the drum the following arrangements are adopted. Immediately below the flange at the bottom of the drum is a horizontal axis carried by a frame. On this axis a flanged roller works and the vertical rope or chain carrying the weight or article to be raised passes over this roller and is guided by it on or off the drum. The upper end of the rope or chain passes over a roller near the top of the drum. A third roller turning on an axis carried by a cross support comes very close to but not into contact with the drum near its lower end. The rope or chain after passing once round the drum passes over the said third roller and by the said roller the coil pass-

ing over it as well as the coils above it are slightly raised upon the drum and the coils on the drum are thus made to occupy the same part of the drum, however, much cord or chain may be passing on to the drum at the bottom and passing off from it at top.

THE COAL TRADE.

Mr. J. R. Scott, the Registrar of the London Coal Market, has published the following statistics of imports and exports of coals into and from the port and district of London, by sea, railway, and canal, during August, 1882:—

By Sea.	Ships.	Tons.	By Railway and Canal.	Tons cwt.
Newcastle	145	137,177	London & North-Western	123,981 2
Sunderland	97	76,323	Great Northern	96,365 0
Seaham	22	15,270	Great Western	88,325 0
Hartlepool	47	15,700	Midland	162,820 0
Middlesbrough	2	1,790	Great Eastern	49,567 17
Blyth	—	—	South-Western	5,873 19
Scotch	12	4,913	London, Chas., & Dover	—
Welsh	26	23,341	London, Til., & South.	—
Yorkshire	20	2,798	South-Eastern	2,305 19
Lincolnshire	1	323	London, Brighton, &c.	—
Small coal	12	5,289	Grand Junction Canal.	998 10
Clinders	—	—		
Colonial	—	—		
Total	384	285,013	Total	630,696 7
Imports—Aug., 1881	425	285,150	Imports—Aug., 1881	505,071 6

Comparative Statement, 1881 and 1882.

By Sea.	Ships.	Tons.	By Railway and Canal.	Tons cwt.
Jan. 1 to Aug. 31, 1882	3309	2,408,239	Jan. 1 to Aug. 31, 1881	4,203,596 0
Jan. 1 to Aug. 31, 1881	3318	2,391,800	Jan. 1 to Aug. 31, 1882	4,093,749 0
Decrease—1882	9	16,430	Decrease—1882	109,847 0

EXPORTS.

Railway-borne coal passing "In transit" through district	Tons	93,783
Sea-borne coal exported to British Possessions, or to foreign parts, or to the coast	53,431	
Coal sent beyond limits by railway	14,183	
Ditto by canal and inland navigation	2,001	69,615
Railway-borne coal exported to British Possessions, or to foreign parts, or to the coast	28,948	
Ditto by rail beyond district	—	—
Ditto, by canal and inland navigation	24	28,972
Sea-borne coal brought into port, & exported in same ship	1,128	
Total quantity of coal conveyed beyond limits of coal duty district during August, 1882	193,408	
Ditto, during August, 1881	211,460	

Comparative Statement, 1881 and 1882.

Total distribution of coal from Jan. 1 to Aug. 31, 1882	1,750,049	
Total distribution of coal from Jan. 1 to Aug. 31, 1881	1,743,171	
Increase in the present year	6,878	

General Statement, 1881 and 1882.

De. increase in coals imported by railway	109,847	
Less increase in coals imported by sea	16,430	93,417
Add increase in coals exported	6,878	
Total decrease in trade within the London district	100,295	

THE COPPER TRADE.

Messrs. HENRY R. MERTON and Co. (Leadenhall-street, Aug. 31) issue the following Statistics of Copper:—

Stocks in Europe:—	Tons	20,448
Chili bars, Liverpool and Swansea	993	
Chili ore and regulus, Liverpool and Swansea (fine)	1,689	
Other furnace stuff, Liverpool and Swansea (fine)	2,457	
London, Foreign copper (chiefly Australian) and Landing	7,346	
Chili bars, Ingots and Barilla in Havre	3,232	
Other copper in Havre	255	
Afloat, and chartered from Chili to Europe (advised by mail):		
Ores and regulus (fine)	3,130	
Bars and ingots	4,223	
By cable, ores and regulus (fine)	650	
Bars and ingots	3,050	
Afloat from Australia to Europe (advised by mail):		
Fine copper	768	
By cable: Fine copper	790	
Total	49,052	

Price of Chili bars, 67½. 15s. per ton.

Messrs. JAMES LEWIS and SON (Sept. 1) write:—The stocks of Chili produce are—Liverpool, 14,174 tons; regulus 745 tons; Swansea, bars 374 tons; ingots 170 tons; regulus 521 tons; bars 20,448 tons; Ingots 993 tons; regulus 3775 tons; equal to 23,195 tons fine against 23,793 tons on Aug. 1, against 29,125 tons fine Sept. 1, 1881, when quotations were—bars, 58½. 5s.; ore, 15s. 9d. The stocks of other than Chili produce are: Liverpool and Swansea, 2477 tons fine, against 2375 tons on Aug. 1, 1474 tons on Sept. 1, 1881, and 2607 tons on Sept. 1, 1880; London, 7335 tons fine, against 7417 tons on Aug. 1, 8400 tons on Sept. 1, 1881, and 6059 tons on Sept. 1, 1880; Havre (Chili, &c.), 3555 tons fine, against 3573 tons on Aug. 1, 5349 tons on Sept. 1, 1881, and 4660 tons on Sept. 1, 1880. Present stock 13,347 tons fine, against 13,365 tons on Aug. 1, 15,223 tons on Sept. 1, 1881, and 13,326 tons on Sept. 1, 1880. There is afloat as advised by mail and telegraph to date—From Chili, 13,243 tons fine, against 10,859 tons on Aug. 1, 4422 tons on Sept. 1, 1881, and 15,653 tons on Sept. 1, 1880; from Australia, 1700 tons fine, against 1600 tons on Aug. 1, 2420 tons on Sept. 1, 1881, and 2328 tons on Sept. 1, 1880; 14,943 tons fine, against 12,509 tons on Aug. 1, 11,842 tons on Sept. 1, 1881, and 17,981 tons on Sept. 1, 1880. The total visible supply is 81,430 tons fine, against 49,667 tons on Aug. 1, 56,191 tons on Sept. 1, 1881, and 63,905 tons on Sept. 1, 1880.

Messrs. RICHARDSON and Co. (Sept. 1) write:—The stocks of Chili copper produce remaining unsold at Swansea on Aug. 1 were—Ore, 687 tons, all since sold; regulus, 3346 tons; since sold 315 tons; copper, 7079 tons; since sold, 577 tons. There were no arrivals of Chili produce. The present stocks are—Chili regulus, 993 tons; copper, 8502 tons; Newfoundland, Betts Cove regulus, 35 tons; Newfoundland, Betts Cove ore, 316 tons; Spanish ore, 9 tons; regulus, 138 tons; precipitate, 1424 tons; Portuguese precipitate, 31 tons; Dutch ore, 47 tons; British ore, 286 tons; total unsold at Swansea—Ore, 688 tons; regulus, 3202 tons; copper, 6502 tons; and precipitate, 1455 tons; representing about 9020 tons fine copper. The private sales of furnace material comprise—Betts Cove ore, 2630 tons at 13s. 3d.; Bolivian ore, 687 tons at 13s. 10½d.; Chili regulus, 315 tons at 14s. 4½d.; New Quadrada ore, 5289 tons at 13s. 6d.; also, 425 tons regulus at 13s. 6d., 275 tons Mexican ore at 14s., 500 tons Behave ore at 13s. 3d., and 270 tons Rio Tinto kernels (about 10 per cent.) at 13s. 3d. per unit. Chili charters advised for the past month are—2450 tons in bars and ingots, and 650 tons (fine) in furnace material for England, and 1600 tons bars for France.

IRON, TIN, AND LEAD.—Messrs. FRENCH and SMITH (Sept. 7) write:—Iron mills and forges are busily engaged, but sharp competition prevents any rise in value. In pig iron the market was irregular, pending the decision of makers as to continued restriction of output. The English iron masters are in favour of a further continuance of the restriction to be in September last year, to curtail production 12½ per cent., but the Scotch masters not being unanimous, the scheme, as at present arranged, will be abandoned at end of present month. The continued large demand and decreasing stocks point to a healthier state of trade, and it is hoped that any increase of production will be absorbed. The threatened difficulties in the labour market will tend to maintain prices. During the greater part of last month sales of tin were rather actively pushed, and prices of foreign fell to 99½. per ton. Reported large shipments appeared to be the only ground for these operations, but as production is now here increasing, and consumption was fully maintained, the statistical returns at the end of the month imparted renewed confidence, and sanguine hopes are now expressed for the future. About 11,000 pounds of tin were sold at public sale at Batavia on the 23rd ult., at an average price of 6½. in Holland. English is in great demand, and price advanced to 108½. for ingots. Lead was steady during the past month, with but little fluctuation in value. Soft Spanish sold at 14½. 5s. to 14½. per ton; English common brands at 14½. 5s. to 14½. 10s.; special at 14½. 12. 6d. We estimate the arrivals during August as 5500 tons.

IRON, COPPER, AND TIN.—Messrs. HENRY ROGERS, SONS, and Co. (Sept. 7) write:—Contrary to general expectation, the Scotch ironmasters have refused to continue the agreement for restriction of output, though invited to do so by the unanimous vote of the Middlesbrough makers. It is understood that their assent was prevented by the action of the smallest of minorities. Though prices receded a little, no panic followed this announcement, owing to the belief that the policy might not be persevered in for long, and that the distressed furnaces would not be blown in unless for manufacture of hematites. It remains to be seen whether the increasing shipments will be sufficient to support the market without restriction. The lowest point touched was 49s. 6d.; we quote to-day 50s. 3d. The Middlesbrough market remains firm, and the shipments for August amount to 95,861 tons, without reference to the considerable quantities shipped for the United States via Hartlepool. The reduction in stocks for the month is over 21,000 tons. Hematites are quiet, but no anxiety is shown to sell. The West Coast copper charters announced during August amounted to 4700 tons; but, notwithstanding this rather heavy figure, the market closes very strong. The war between Chili and Peru has apparently taken a new lease of life, and sanguine expectations are entertained of the coming autumn trade. Copper appears to be strongly held, and the scarcity of cash warrants of late has been remarked. The statistics for the month—or, indeed, for the last three months—are not especially good, but the future is believed in. The smelters are understood to be full of work, and the renewal of Indian demand is expected. Brazier sheets are now quoted 78½. to 79½. Some business has been done in yellow metal, and with raw material at its present price, the quotations for all kinds of manufactured copper seem very moderate. The tin statistics to Sept. 1 show:—Stock in warehouse, London, 6198 tons, against 7119 tons on Sept. 1 last year. Total supplies, including afloat for London, 7321 tons, against 9054 tons on Sept. 1 last year. Stock in and afloat for America 3320 tons, against 3212 tons on Sept. 1 last year. The increase of stock in and afloat for America since Aug. 1, 1881, 930 tons. The chief interest of the market centres in America. If she continues to divert supplies from us, with our small spot stock there may be the element of a boom in prices here. If, however, the

increase of 1000 tons in a month to her visible supplies checks this demand, the pressure here to force prices up would be lightened. The position is complicated by the forthcoming abrogation of the American preferential duty on Jan. 1 next, before which date the prices in the two markets must adopt a common range.

COPPER AND TIN.—Messrs. FRY, JAMES, and Co. (Sept. 7) write:—Copper has shown rather more life although there has not been any great activity. A rather stronger demand for Chili has caused an advance of about 15s. a ton on that kind, whilst other descriptions also show more firmness. Tin has wavered as usual, but in the last few days a substantial advance in price has taken place—say, 3½. per ton during the fortnight—and for the moment a firm tone prevails.

Messrs. VIVIAN, YOUNGER, and BOND (Sept. 7) write:—The recovery at the beginning of last month in Chili bars from 67½. to 68½. 10s. was speedily lost, and at a decline of about 30s. per ton the market dragged a good deal, though the trade continued to take fair supplies of furnace material, chiefly precipitate, at 14s. to 14s. 4½d. per unit. Manufacturers are well employed on orders, and latterly there has been more Indian enquiry. Chili bars close firm at 68½. 10s., but the less speculative descriptions, such as Australian, which depends on consumers' demand, respond but slowly to the advance. In tin there has been considerable fluctuation during the past month, the large operators appearing to favour lower prices. Foreign fell from 105s. 6d. to 99s. 6d., which had the effect of inducing sales amongst weak holders. Towards the close of the month it became evident that the London statistics would show great improvement, owing to the bulk of the August supplies being shipped from the Straits (1175 tons) and Australia (550 tons) to America. For London 100 tons Straits, and 450 ton, Australian.

Messrs. FICKLEY and ABELL.—Sept. 7: GOLD: There is no export demand for gold and all arrivals have been purchased by the Bank of England. Altogether about 141,000½. has been sent in. 60,000½. in fine bars arrived yesterday from New York, and some small amounts during the week from the continent. 57,000 sovereigns have been withdrawn for Lisbon and Egypt. The P. and O. steamer Lombardy took only 5,400½. for Bombay.—SILVER: The market has been fairly steady since the issue of our last circular, the price having been maintained at 57½d. per oz. standard, at which rate about 49,000½. per Aracaonia, for Chili, was sold. This quotation to-day is however weak, the allotment of India Council bills yesterday being much greater than last week. In addition to the amount above referred to about 20,000 has arrived from Buenos Ayres and Rio. The P. and O. steamer Lombardy took 121,800½. yesterday for Bombay. The Main, from New York, brought 34,000½.

QUICKSILVER.

TO THE 31ST OF AUGUST, INCLUSIVE.

Season's import entries, bottles, about	1881.	1882.
Imports from Jan. 1 to Aug. 31	46,446	48,168*
Exports	14,891	25,632
Imports for August	600	1,178
Exports for August	2,135	4,187

Price, 1881, about 6½. 5s. per bottle; 1882, about 5½. 17s. 6d. per bottle. Stock in London to Aug. 31, 1882, roughly calculated, is about 102,000 bottles.

* Including last December, Spanish.

London, Sept. 8.

J. BENNETT BROS.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Sept. 7.—Trade has undergone very little change of late in either North or South Derbyshire, and this has been the case more particularly as regards mining. In the lead district for a long time past work has been of a routine character, there having been no extensions, for Derbyshire does not appear to have any attractions for capitalists, seeing that there are no baits laid in the shape of alluring prospectuses, showing what vast profits can be made by taking to mines, the profits of which the owners wish to share with others. In coal mining business has been improving of late, and a large tonnage of household coal has been forwarded to London from Clay Cross, Eckington, Grassmoor, and several other mines. Steam coal has also been going off tolerably well, but not to the extent that could be desired. It is, however, quite probable that when the new docks at Boston are completed, and those at Sutton Bridge as well, that the steam-coal of Derbyshire will be in a much better demand for shipment, and so placed in a position to compete with the Humber ports, from which large quantities of coal raised in the West Riding of Yorkshire are shipped to the North of Europe, France, and to the various ports on our own coast. At the ironworks trade has been tolerably good, there being a large output, but it will probably be checked by the decision come to by the Scotch ironmasters not to continue the league with those in Cleveland to restrict the production, and which has been in operation for several months. It has been of considerable advantage to the inland ironmakers owing to the decrease in the competition in the Lancashire, Staffordshire, and other markets. In Sheffield business continues good all round, there having of late been some heavy orders given out for armour-plates, while they are now being made of more than usual thickness for composites. Some of them are as much as 18 in. thick, the larger proportion being of iron at the back. A fair business is also being done in ship and boiler plates, but it is likely that, as regards the former, a good deal of the trade will go to the North of Europe, to the works that are close to the yards where the ships are built. Crucible steel makers have been busier of late, and there has also been a large out put of Bessemer for cutlery and tools. Rails are not in such good request as they were, and the price at which contracts have to be taken does not admit of more than bare profit. Tool and shearshear makers have been doing well, whilst there has also been a good demand for the best qualities of table and other cutlery, saws, files, and razors. The foundries are now as well off as they have been during any period of the year, whilst makers are also favourable for business.

The coal trade remains without any material alteration so far as South Yorkshire is concerned. There has, however, been a slight change made by the Great Northern in the charge for the hire of coal and coke wagons by the company. Up to 50 miles inclusive the charge for collieries in Nottinghamshire, Yorkshire, Derbyshire, and Durham will now be 6d. per ton; over 50 miles, and to London inclusive, 9d. per ton; and the South of London 1s. per ton. This is only a small concession, but what is looked for is a reduction of the rate from collieries in the West Riding to London, which is so much higher than it is from Nottinghamshire and Derbyshire.

CRUSHING AND PULVERISING ORES.

An improved method of crushing and pulverising ores by combined pressure and grinding between metallic surfaces, uniting both methods in one machine has been invented by Mr. J. TAYLER, of New York, who constructs a frame of iron, the sides of which are parallel with each other and tied together at the desired distance apart by means of iron rods having shoulders resting against the inside of the plates passing through holes therein, and secured on the outside by means of nuts, or instead of having shoulders the rods may pass through metallic pipes placed between the two side plates and cut of a length equal to the distance desired between the sides for the proper play of the jaws or any other ordinary bracing may be employed. Between the side plates he places two jaws of cast-iron or other proper metal, which are suspended on rods which pass through holes in their upper ends and rest in bearings properly constructed in the frame, at a proper distance apart to give the desired opening between the jaws to receive the rock or ore to be operated upon. The jaws are so constructed that the bearings by means of which they are suspended in the frame, are in a horizontal line, that is, in a line parallel to the base of the frame, though, if desired, one jaw may be lengthened above and the bearing for that jaw be arranged higher up than the other, care being taken that the similarity of the lower portion of the two jaws shall be retained.

The lower portion of each jaw is pierced with a hole through which passes a rod projecting through a slot in the frame on the side of the machine. These rods are tied at the ends by means of a link arranged to play backwards and forwards on the outside of the frame and held in place by collars at the ends of the rods. The link is provided with a boxing and a wedge-shaped key which is moved up and down, and secured in position by means of adjusting screws, for the purpose of adjusting the lower ends of the jaws in the desired degree of proximity. The jaws are provided with face plates, which present a serrated or corrugated surface on the upper portion. These serrations or corrugations are made to cross the jaws laterally, the more effectually to engage the rock or ore, and prevent its slipping or being forced upwards by the action of the jaws when in motion, and to hold it in position while being crushed by the grinding pressure. The lower portion of the surface of the jaw's face is formed

by curved projections running across the face of the jaw, with or without corresponding hollows, so arranged that when the jaws are in perpendicular position the projecting curves on the two jaws will be directly opposite to each other so as to come in contact, or as nearly in contact as the setting of the link will permit.

The inner surface of the frame is cut away opposite to the opening between the jaws so as to admit of a slide, made of cast-iron or other proper metal, which is made of the proper thickness to bring its surface in close proximity to the edge of the jaws, and secured in such manner that it can be removed at pleasure, and replaced with a new one when worn or injured. The face plate may be cast in one piece, or may be divided into two pieces, so that one piece may be removed and replaced without disturbing the other. The face plates and side plates used in the crusher are made of chilled iron or steel, so as to effectually resist the action of the rock and ore, but if desired they may be constructed of wrought-iron or any other proper metal. The face plates are secured in position by means of bolts passing through the jaws, their heads being embedded in flanged grooves in the face plates, and made permanent by filling in with Babbitt metal, or other suitable substance, and secured by nuts on the outside of the jaw.

To prevent the strain which would come upon the bolts by the peculiar action of the jaws, the face plates are constructed with a flange on the back, which is fitted into a groove or channel cast in the jaw, extending laterally across it. In use the power is applied to the pitman by means of the crank shaft, and the jaws are oscillated backwards and forwards with a crushing, grinding motion, and the rock which is placed between the jaws at the top is crushed as it descends, until it reaches the rounds, where it is ground into a granulated or pulverised mass, according to the adjustment of the bottom of the jaw.

RAISING LARGE QUANTITIES OF WATER FROM DEEP MINES.

The constantly increasing extent of industrial mining operations renders the difficulties to be encountered in the drainage of mines greater every year; but fortunately engineering science appears well able to keep pace with the requirements of practical operations. Brief reference was sometime since made in the *Mining Journal* to an interesting paper on Hydraulic Machinery for Deep Mining, by Mr. JOSEPH MOORE, C.E., of San Francisco, read before the Institution of Engineers and Shipbuilders in Scotland, and as the paper has now been printed in the Transactions of the Society some further details may be given. In giving the description of the former pumping machinery Mr. Moore states that the Comstock lode was discovered about 1857, and was principally worked along the surface, where it was very rich in silver and gold. It was very wide and comparatively dry, but here and there a pocket of water would be struck, and as the surface work was open to the weather more or less surface drainage found its way to the bottom. The first pumps put in were 6 in. Cornish pumps driven from the hoisting-engines; these were followed by 8 in. and 10 in., and when 12 in. was reached it was thought a large undertaking. The general plan of the pumps and valves remained without material modification except in size and strength, and in one case 8 in. pumps were down to 3000 ft. vertical, when about five years ago it became evident that something new must be done with the pumping machinery, if a greater depth was to be worked, so it was decided to build something larger than anything that had been before, and strong enough to sink 2000 ft. Two direct-acting high pressure engines with 12 in. pumps and 8 ft. stroke were made. It was soon seen, however, that there was a limit to pumping by long lengths of pump rods, by whatever system, as it was impossible to move, with a reciprocating motion at any great speed, with such a weight and length of rods, and the pumping capacity of these large engines did not come up to what was expected of them; besides, the engines were continually breaking down. The slightest increase of speed over six revolutions per minute would cause a breakdown. Again, when water was short, the engines could not go slower than three revolutions per minute, and water had to be let from the other pumps down the shaft. This, with wood at \$12 per cord (equal to 1200 lbs. of coal per cord) was found to be very expensive.

The Chollar, Norcross, and Savage Mines had joined to sink a joint shaft on the dip to drain the water from each mine, and pump it into the Suto Tunnel. After connecting with this tunnel at 1600 ft. they sunk to 2150 ft., and on approaching the Savage incline they struck hot water in such quantities that it required the pumps to be run 6½ strokes per minute, and there soon arose the question of more pumps or abandonment of the mine. At this juncture the Risdon Iron Company, of San Francisco, proposed to raise the water by means of hydraulic engines without the use of pump-rods at all. They laid their plans before the joint owners of these mines, and offered to put the machinery in place at their own risk and guarantee to pump 1600 gallons of water per minute from the 2400 ft. level to 1600 ft., and an additional quantity of 800 gallons per minute from a 3200 ft. level to the 2400 ft. when the shaft should arrive at that depth. The plan was not received very favourably, and only Mr. J. L. Requa, Superintendent of the Chollar, Norcross, and Savage shaft could be found to endorse their ideas. Mr. McKay, of Bonanza fame, gave his consent and the Risdon Iron Company's offer was accepted, and the work begun. The machinery used consists of a steam-engine on surface working, a hydraulic accumulator which by pipes worked an hydraulic engine at 2400 ft. from surface to raise water by plungers to the level of the Suto Tunnel. There are four tubular boilers, 54 in. diameter 16 ft. long, each 44 tubes, 30 in. diameter and 16 ft. long. The fire is passed under the boiler and back through the tubes. The engine is compound high pressure cylinder 35 in. diameter; low pressure 70 in. diameter 10 ft. stroke, with two piston rods, the three piston rods being attached to one cross-head running in guides, and working direct four pumps 8½ in. plungers. The engine has no fly-wheel, and is operated with a Davy valve motion. These pumps force the water through an 8 in. pipe to air vessel 25 in. internal diameter and 70 ft. high, and thence down shaft to the hydraulic engines at the 2400 ft. station, the exhaust water being returned to the surface through 10 in. pipes to the receiving tank to be again pumped down the mine.

The pressure in the air vessel was 960 lbs. (1000 lbs. being the intention), consequently the pipes at the bottom had to sustain a pressure of about 2000 lbs. per square inch. Valves and a small loaded piston were attached to the inlet valve of the Davy motion, and any increase of pressure in the air vessel over the proper quantity brought the engine to a stand still, while any decrease would again start it up. This was thought necessary so that if the electric signals from the hydraulic pumps should fail, and the pumps be stopped without the knowledge of the engineer on the surface, no mischief should be done. An air compressor of the capacity of 60 cubic inches per minute at 1000 lbs. pressure was provided to keep the air vessels properly supplied with air, and was found amply sufficient, running eight hours per week on the main air vessel and about 50 on the lower reservoirs. The greatest leakage of air was in the pipe connections from the surface to the 2400 ft. level and their connections. The pipe was only ½ in. gas pipe and light fittings, as stronger could not be obtained in time from the Eastern States on account of press of business.

Underground there were two air vessels on the discharge or exhaust pipes and four on the inlet pipes, of 13 in. for pressure and 14 in. for exhaust pipes, and 18 ft. high; also one on each pipe at the 1600 ft. level of 16 in. and 18 in. diameter. These were formed of ample capacity and kept the fluctuations within a few pounds pressure upon the columns. There was a feeding chamber in each station consisting of a pipe containing 25 per cent. of the capacity of the air chamber. This pipe lay below the level of all the chambers, and was connected to them by two pipes, one from the bottom of air chamber to bottom of pipe, and another from top of air chamber to top of pipe, and another from bottom of charging pipe to the atmosphere to let off the water at each charge. If this outlet pipe were shut and the charging chamber full of air, then by opening the two pipes the water would fall by its own gravity, displace the air, and send it into the air chamber, and by repeated charges the object was accomplished, the number of charges depending, of course, upon the

sizes of chambers and the density of the air charged into the charging cylinder. In this case the air was taken from the pipes of the compressing engine used for drilling purposes, and was usually at about 70 lbs. pressure per square inch. There was also attached to the pump's air vessels, at the 2400 ft. station, a very effective charging pump consisting of a ram, one end of which worked in a water cylinder, and the other end in an air cylinder. This air cylinder was connected to the compressing engine pipes with 70 lbs. pressure, with suitable receiving and discharging valves like an ordinary air pump, while the water end was connected by an open pipe without valves to one of the barrels of the water rams, the pressure of 70 lbs. of air was sufficient to force the ram in water cylinder back against the exhaust in the pump, so that the full pressure of water, when the plunger worked, forced the ram and air out again against the end and into the air chamber, where it remained until the main ram completed its stroke and was forced back by the air, when the exhaust was opened. This is at times convenient to feed up any leakage of air, is cheap of construction, but of course expensive in water, and is only used on rare occasions. Feeding by the compound compressor is the best, next by the feeding reservoir, which can be done at any time and under any pressure which may be on the water columns, and last, the auxiliary air pump used only occasionally.

It is found that the proportion of power developed by the engine pumps, not the indicated power of the steam cylinders, but the water pumped and the water consumed in the hydraulic ram cylinders, is as 1856 to 2050, or 90.5 per cent., while by the pressure gauges (there have not yet been any cards taken off the rams) it is known that the engines work on about 12 to 15 per cent. for friction. All the opening and pipes are large, larger perhaps than is necessary, as it increases the weight very considerably. The exact data are—engine pressure (steam) easy, 80 lbs.; pressure in accumulator 960 lbs.; Suro Tunnel from surface 1600 ft.; pump station, 2413 ft.; height of Suro Tunnel from pump 813 ft. The pumps are now raising from 1600 to 1700 gallons per minute, which can be increased to 1800 gallons if necessary. The engine is developing actual water pumped (not indicated horse-power in the cylinder of the engine) about 17 to 18 horse-power per cord of wood, the cord corresponding to 1000 to 1200 lbs. of coal. It is intended to get this consumed with more accuracy by-and-by, but it compares very favourably with the very best mill engines in California, and is better than the other pumping engines. The author then explains the difficulties encountered and how they were overcome, the materials used and found suitable, and mentions that large plant somewhat similar is now being put into the Eureka Mine, Nevada. It is not yet over 1200 ft., but it is intended to go 3000 ft. In this plant it is intended to sink the shaft and work it in 600 ft. lifts, with a 600 ft. suction pipe for sinking with, and also, from the accumulator or air vessel, to drive the hoisting engine. It will have a capacity of 10,000 lbs. live load for 3000 ft. depth, and a maximum velocity of 1000 ft. per minute. This is arranged with a double set of rams, with sliding set of cranks on each end of the reel shaft, and arranged to be operated by the engineer, who can set the cranks to any stroke he thinks necessary, so that in starting from the bottom of the shaft he can lengthen the stroke, and if he wishes to slow down or stop he can run the cranks in until he comes to a balance. In lowering the cage and car he lets the engine pump the water into the accumulator, and thus stores up power for the return load.

In the course of the discussion which followed the reading of the paper, Mr. Ralph Moore explained that the usual mode of raising water from mines was to place the steam-engine on the surface and to convey the power in pump-rods to rams placed at various points in the shaft, the lowest ram raising the water to the one above it, and so on until the water was discharged at the surface. Another mode was to place the steam-engine at the bottom of the shaft close to the pump, thus dispensing with pump-rods. In this case the boilers were either placed at the bottom of the shaft, or steam was conveyed from the surface. The mine to which the new arrangement was applied had reached the economical or indeed the practicable limit to which the first could be applied, because the dead weight in 2200 ft. of pump-rods and pit-work required to raise 1600 gallons of water per minute was too great. The second mode was equally impracticable, because steam-boilers could not have been put in at the bottom of the pit for the great heat, and for the same reason neither steam-pipes nor a steam-engine could have been put down. This state of matters necessitated a complete departure from ordinary practice—viz., the application of an economical steam-engine on the surface to work an hydraulic engine at the bottom of the shaft. In this way the weight of the pump-rods or the heat of the steam-engine, where the natural heat of the mine was almost unbearable, was avoided. He believed that small quantities of water had been pumped by this method, but nowhere that ever he had heard, had 1600 gallons per minute been raised 813 ft., save in this instance. Whenever there was any marked departure from ordinary practice there was necessarily much that was new, and almost as necessarily there were some failures. The writer of the paper had given a clear account of these matters, and also fearlessly exposed any failures made, and explained how they were overcome. He thought the mechanical details were well carried out. There might be many points in the arrangements which members might usefully study; for example, the accumulator and air vessels, and the mode of charging them with air. The accumulator he thought superior to Sir William Armstrong's. The mode of joining pipes was very novel. Everyone who had experience in laying pipes knew the difficulty of making joints to stand a pressure of 2000 lbs. on the square inch with cold water, or of 450 lbs. per square inch with hot water. The idea of filling a copper ring with lead seemed very ingenious and effective. Another feature was the clacks which were very neat, and, so far as he knew, the one fixed upon was new. The stuffing-boxes were also good. The piano valves and the whole arrangements for working the valves were well worth notice. The remarks on calculations for strains of pipes and the mode of strengthening by glands are not new, but are much to the point. Upon the whole, he had not known of so marked a departure of so large dimensions having been more successfully put in operation, and he was inclined to think it had opened up a new era in raising large quantities of water from great depths.

The discussion was continued by Mr. John Thomson, who remarked that the air accumulator had a great capacity, and some special value would be found in it. With it any pressure could be put on very simply by pumping in the air or compressing it more. Another point worthy of notice was that they had dispensed with cup leather altogether which was a very extraordinary improvement. The form of hydraulic joints described was very ingenious. The copper lined with lead should make a first-rate and lasting joint and very effective, and it had been found so. Mr. Howden remarked that the hydraulic pumping described in the paper is done on a large scale, and carried out successfully under difficulties of a formidable and unusual character. To pump water from a depth of 2400 ft., and at a temperature of 160°, is an undertaking of no ordinary kind, and it is interesting to learn how it has been accomplished. It is evident that without the large air vessel in connection with the accumulator, it would be impossible to work safely the pumping engines at the bottom of the mine under the necessary high pressure required. In regard to the use of ordinary hemp packing in the stuffing-boxes, with glands instead of cup leather packings, which Mr. Moore had found to do well, he might state that in accumulators for rivetting machines with pressures of 1500 lbs. per square inch, it was found that ordinary packings in stuffing-boxes were quite as satisfactory as cup leathers. Mr. David Johnston said that he had been working in the same direction for the last two years, and had been very successful with some of his hydraulic pumping engines, but the highest pressure he had wrought with was 90 fms., but had one being erected to raise the water 700 ft., which was not yet completed. The ideas were very much the same, that it must come to hydraulic power for long lifts, as the weight of rods would be too great, and the best means of conveying power was through pipes, hence the advantage of hydraulic engines in mines. He thought great credit was due to Mr. Moore for pioneering the way in America. The President, in conclusion, said that there could be no doubt but Mr. Moore had overcome difficulties in the only way in which it could be

accomplished; and therefore they would agree with him that Mr. Moore had earned the warmest thanks of this Institution for the trouble he had taken in sending them the paper.

The thanks of the meeting were then heartily accorded.

LIST OF SMELTING, METAL EXTRACTION, ARSENIC, AND BARYTES COMPANIES IN THE UNITED KINGDOM.

TIN.
Thomas Bolitho and Sons, Chyandour, Cornwall.
Williams, Harvey, and Company, Trethellan and Mellanear, Cornwall.
Daubuz and Company, Cavedras and Treloweth, Cornwall.
R. R. Michell and Company, Trevelick, Penzance, Cornwall.
Bischoff Bridge Company, Bischoff, near Truro, Cornwall.
Redruth Tin Smelting Company, Redruth, Cornwall.
Calenick Tin Smelting Company, Calenick, Cornwall.
Charlestown Tin Smelting Company, Charlestown, St. Austell.
Penpoll Tin Company, Redruth.
COPPER.
Vivian and Sons, Hafod, Swansea.
Pascoe Grenfell and Sons, Middle Bank, Swansea.
Nevill, Druce, and Company, Llanelly.
Williams, Foster, and Company, Swansea.
Mason and Elkington, Pembrey.
Copper Miners' Company, Aberavon.
Charles Lambert and Company, Port Tennant, Swansea.
The British and Foreign Copper Company, Liverpool and St. Helen's.
Landore Copper Company, Landore, near Swansea.
Newton, Keates, and Company, St. Helen's.
Baxter and Company, St. Helen's.
Bibby, Sons, and Company, St. Helen's and Liverpool.
W. Roberts, jun., St. Helen's.
James Keys and Son, Whiston Works, Cheadle, Staffordshire.
Cape Copper Company, Swansea.
Ravenhead Copper Company, Liverpool.
Pontifex and Wood, Garratt Copper Mills, Surrey.
LEAD.
Bewick and Partners (Limited), Hebburn, Newcastle-on-Tyne.
Nevill, Druce, and Company, Llanelly.
Runcorn Smelting Company, Runcorn.
The Panther Lead Works, Bristol.
Blackworth Lead Works, Bristol.
E. Pass and Son, Bedminster Works, Bristol.
Weston, Sons, and Company, Bristol.
Cookson and Company, Howden, Newcastle-on-Tyne.
Locke, Blackett, and Company, Walsend-on-Tyne.
Executors of Jos. Dinning, Haydon Bridge.
Vivian and Sons, Swansea.
Enthoven and Sons, London.
Locke, Lancaster, and Company, London.
Pontifex and Wood, Farringdon Works, London.
Logan Edward, Birkenhead.
Par Lead Smelting Company (C. Remfrey), Par, Cornwall.
Peter Glover and Robinson, Widnes Lead Works, near Warrington.
White Rock Works, Swansea.
Quirk, Barton, and Company, St. Helen's.
Adam Eytton, Llanerchymor, Holywell.
The Cambrian White Lead Company, Brymbo, near Wrexham.
Joseph Walker, Parker, and Co., Dee Bank, Bagillt, near Wrexham.
Governor and Company of Lead Smelters, Nenthead, Alston Moor.
Stanhope, Durham.
W. B. Beaumont, A'leendale, Northumberland.
Look' ope, Durham.
Mill Dam Mining Company, Bakewell.
Joseph Wass and Son, Lea Lead Works, Matlock Bath.
J. Fairburn and Company, Middleton Dale and Bradwell.
Snailbeach Lead Company, near Shrewsbury.
Pontesbury Lead Works, Minsterley, near Shrewsbury.
J. H. Moore Brough Works, Hope, near Sheffield.
E. Backhouse, Darlington.
Greenside Mining Company, Penrith.
The Keld Head Mining Company, Wensleydale.
John York, Pateley Bridge.
Duke of Devonshire, Grassington.
The Duke of Buccleuch, Wanlock Head.
The Lead Hills Mining Company, Lead Hills.
Lister, Robinson, and Company, Grinton Moor.
The Arkendale Mining Company, Arkengarthdale.
The (A.D.) Lead Company, Blakethwaite.
R. Milner and Company, Belde Hill.
The Swaledale Lead Company, West Swaledale.
Executors of Sir G. W. Denys, Bart., Surrender, Swaledale.
Charterhouse, Blagdon, Mendips, Bristol.
Waldgrave Company (Limited), Mendips, near Wells.
The Mining Company of Ireland (Limited), Dublin.
E. C. Goodhart and Company, Penclawdd Lead Works, near Swansea.

ZINC.
Bagillt Zinc Company.
Vivian and Sons, Swansea.
Kenrick and Son, Wynn Hall, Spelter Works, Ruabon.
Charles Titterton, Phoenix Zinc Works, Warrington Junction.
Dillwyn and Company, Swansea.
Joseph Thompson, Spelter Works, Carlisle.
Ryland Brothers, Warrington.
Crown Zinc Company, Swansea.
Villiers Spelter Company, Morriston, Swansea.
Swan and Company, Maryhill, Glasgow.
Swansea Vale Spelter Company (Limited), Swansea.
ARSENIC.
Cornwall Arsenic Company, Hayle and Bischoff Bridge, Thomas Willis Field, Managing Partner, Marazion, Cornwall.
Devon Great Consols Mining Company (Limited), Tavistock.
J. B. Drayton and Company, Harrowbarrow, Callington.
English Arsenic Company, Roseworthy, Gwinear, Cornwall.
Palmer and Hall, Morriston, Swansea.
A. C. Hadland, Swansea.
Plympton Mining and Arsenical Company (Limited).
Okel Tor Arsenic Works, Calstock.
J. Paynter and Trythall, Bischoff Chemical Works, Devoran, Truro.
Holmshush Mining Company, Callington, Redmoor.
Greenhill.
Trevice Chemical Company (Limited), Scorrier, Cornwall.

NICKEL & BRONZE.—A financial committee of enquiry appointed to consider the question of substituting a nickel for the bronze coinage at present in use in France has finally decided in favour of the project, which, it may be mentioned, has already been adopted by other countries and, notably by Germany, Belgium, and Switzerland. The work thus thrown upon the mints of Paris and Bordeaux will be gigantic, it being estimated that there are 500,000,000 frs. worth of bronze coins in circulation, but the necessary appliances are already in hand, and the work will be rapidly proceeded with.

RAILWAYS IN EUROPE.—The Statistical Society has published a table showing the railway mileage of the different countries of Europe, from which it appears that Germany comes first with 21,500 miles; followed by Great Britain, 18,200; France, 17,200; Russia, 14,600; Austria, 12,200; Italy, 5500; Spain, 4900; Sweden, 4600; Belgium, 2500; Switzerland, 1565; Holland, 1435; Denmark, 1160; Roumania, 920; Turkey, 870; Portugal, 660; and Greece, 6 miles.

BORING OPERATIONS WITH BOART.—A correspondent writes:—"In the course of some boring operations which have recently been carried on by the Government of the Cape of Good Hope in the search for coal, it occurred to the geologist in charge to make trial of native boart in lieu of the Brazilian carbonado, which had until then been employed. The experiment proved a complete success. The last six crowns used were of 3 in. diameter set with boart. It was found that these bored through 1100 ft. of sandstone and shale, part of it exceedingly hard, being indurated by contact with intrusive rock. The average boring per crown was, therefore, 183 ft., and the last crown is nearly as good as new. Of the above six crowns, one bored through 322 ft. 7 in., and was still usable, while another bored through 350 ft. In precisely the same class of country, eight crowns supplied from London and set with carbonado, bored only 30 ft. each. The boring effected with the latter cost at the rate of 27s. 6d. per foot; while the work done with boart, in the same class of rock, cost less than 2s. per foot bored. The advantage in the use of boart is increased by the fact that owing to the greater depth bored by a single crown, there is less delay caused by the resetting of the stones. Great care is, however, necessary in the selection of boart for the purpose, as a very large percentage of the ordinary boart of commerce is unsuitable."

CARTA PARA GOLD MINING COMPANY.—Mr. Justice Day has fixed Sept. 19, at the chambers of the Vice-Chancellor Hall, in the Royal Courts of Justice, for the appointment of an official liquidator of this company.

MR. JOHN RISLEY, STOCK AND SHARE BROKER,
38, CORNHILL, LONDON, E.C.
ESTABLISHED TWENTY YEARS
BANKERS: LONDON AND WESTMINSTER, Lothbury.

ARGENTIFEROUS COPPER MINE—TO CAPITALISTS.

WANTED, SEVERAL SUMS OF £250 to £1000 to COMPLETE a SYNDICATE for the PURCHASE of a most VALUABLE MINE in the Basse Pyrenees, 11 hours only from Bayonne. Estimated annual returns at least 22 per cent. See report of English mining engineer (highest authority on Pyrenean Mines), sent on application. Contract with first Swansea house to take whole produce at liberal prices. Mine easily inspected by investors during present holidays.
Address, "A. C. M.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

WANTED, PROMPT CO-OPERATION of a FINANCIAL AGENT in COMPLETING DEVELOPMENT of a very valuable MINING PROPERTY in private hands, which will take six months longer before machinery is ready and returns made. Liberal terms.
Address, "S. L.," MINING JOURNAL Office, 26, Fleet-street, E.C.

SULPHUR ORE.

WANTED, THREE HUNDRED to FOUR HUNDRED TONS PER MONTH of GOOD QUALITY SULPHUR ORE. State price and quantity per month, delivered on the Mersey; also send copy of analysis of ore if there be one; cupreous ore not objected to.
Address, "Mundic," MINING JOURNAL Office, 26, Fleet-street, E.C.

WANTED, ONE or TWO GENTLEMEN, with small capital, to DEVELOPE a HIGHLY-PROMISING YOUNG TIN MINE in CORNWALL. Mine working by water machinery, returning tin. For particulars, apply to Capt. J. EDWARDS, Polyan Consols Mine, St. Austell, Cornwall.

TO SHAREBROKERS AND OTHERS.

OFFERS WANTED for SHARES in WEST PHENIX (Cost-book) TIN AND COPPER MINE, near Liskeard; also for SHARES in NEW WHEEL PEEVOR (Cost-book) TIN MINE, Redruth. Calls will be all paid to date of transfer.
Address, "T. R.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

WANTED, a YOUNG MAN who is an Experienced Mining Engineer or Captain, who can dial and plot, make a plan of the Mine under his charge, &c., who understands Hydraulics, and who has been employed in the Crushing, Dressing, and Preparation of Lead ores. He will have to take charge alternately with another Captain, and they will be required to send up reports every week independently of each other, but otherwise take united responsibility. State wages, age, and send copies of certificates, &c.
Letters to be addressed to HENRY MAUDSLAY, M. Inst. C.E., Westminster Palace Hotel, Victoria-street, London, S.W.

A YOUNG MAN (20), having a good knowledge of Analytical Chemistry, and who is thoroughly conversant with the French language, is desirous of MEETING with EMPLOYMENT in which those acquirements may be of service.
Address, "F. E. H.," 10, South-terrace, Camborne, Cornwall.

SOUTH CARADON MINE, LISKEARD.

SPARE MINE MATERIALS FOR SALE.—Apply to the Manager, on the Mine.
September 6, 1882.

DIRECTORS.—THREE GENTLEMEN REQUIRED to complete the Board of an IMPORTANT MINING COMPANY of the highest character. Vendors take no cash. Bankers, Solicitors, Accountants, and Secretary to be appointed.
Address, "Mineral," Q 396, Address and Enquiry Office, The Times Office, E.C.

TO SYNDICATES AND CAPITALISTS.

ADVERTISERS INVITE the CO-OPERATION of GENTLEMEN willing to FORM SYNDICATES—one for the purpose of securing most valuable MINING PROPERTIES already investigated by eminent experts; and the other for utilising valuable PATENT RIGHTS, which are proposed to be formed into Companies with Limited Liability.
For further particulars, apply to MERRICK and Co., 21, Crosby Hall Chambers, London, E.C.

STOCK	PUT OR CALL OPTIONS.
EXCHANGE	Our Circular on OPTIONS will be forwarded on application, containing full explanations of the system. Everyone desirous of making money should study it. By the mode adopted the profits are unlimited, and the losses strictly confined to the amount paid for the PUT or CALL.
SPECULATION	SPECULATIONS WITHOUT OPTIONS.
ON THE	In this case the losses can be limited to the cover or deposit. Having special sources of information, we are enabled to advise clients to advantage. The Telephone and the Exchange Telegraph are laid on to our offices.
ONLY SAFE	A Printed Register of non-quoted Shares for Sale and Purchase is kept, free of charge, for the convenience of clients.
SYSTEM.	ADDRESS: MASTERMAN SMITH AND CO., STOCKBROKERS, 58, LOMBARD STREET, LONDON, E.C.
Losses Limited to 1 or 2 per cent.	
LARGE PROFITS CAN BE REALISED.	

SILVER-LEAD MINE.
PRIVATE CAPITALISTS and PROMOTERS of PUBLIC COMPANIES are INVITED to ARRANGE for the FURTHER DEVELOPMENT of a SILVER-LEAD MINE possessing indications of the most satisfactory character. Returns of ores can be made immediately after the erection of dressing machinery, and the holding, which is liberal, will be transferred on unusually favourable conditions.
The mine can be inspected and full particulars obtained on application to "H.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

SILVER-LEAD AND ANTIMONY MINES IN NORTH CORNWALL.
THE ANTICIPATED RISE in the PRICE OF LEAD makes the present a FAVOURABLE TIME TO PURCHASE or arrange for the development by a few private capitalists, or by a public company to be formed, of a valuable SILVER-LEAD and ANTIMONY SETT in North Cornwall. The terms of the lease are favourable, and the transfer of it can be made on conditions highly satisfactory to the purchaser.
All information can be had upon application to Mr. W. PAYNTER, jun., Commission Agent and General Merchant, Wadebridge, Cornwall.

SCIENCE AND ART DEPARTMENT.
NORMAL SCHOOL OF SCIENCE, AND ROYAL SCHOOL OF MINES, SOUTH KENSINGTON, AND JERMYN STREET.
The SESSION 1882-83 WILL OPEN ON OCTOBER 2ND, 1882.
The Prospectus may be obtained from the Registrar, Normal School of Science South Kensington, S.W.

MR. THOMAS CORNISH, CONSULTING MINING ENGINEER AND FINANCIAL AGENT.
Twenty-five Years Practical Experience in Australian Gold Mining and Management.
Advice on Gold Mining Investment.
Author of "Gold Mining: its Results and its Requirements," 81, FENCHURCH STREET, LONDON, E.C.

ENGLISH CAPITALIST wishing a CORRECT REPORT on the SILVER MINES of COLORADO will do well to apply to—
Capt. DANIEL ROBERTS, Georgetown, Colorado.

MR. W. TREGELLAS, 40, BISHOPSGATE STREET WITHIN, E.C.
Deals in all descriptions of STOCKS and SHARES at close market prices.

MESSERS. ABBOTT AND WICKETT,
STOCK AND SHARE BROKERS, REDRUTH.
ORDERS BY TELEGRAM PROMPTLY EXECUTED.

BAINBRIDGE, SEYMOUR, AND RATHBONE,
MINING AND CONSULTING ENGINEERS,
2, GREAT GEORGE STREET, WESTMINSTER.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Sept. 6—Pierrefitte	20	£22 15 0		Richards, Power, & Co.
8—South Darron	45	14 1 0		Walker, Parker, & Co.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Sept. 7—Pierrefitte	70	£3 1 0		Pascoe, Grenfell, & Co.

BOARD OF GOVERNORS.....THE COLSTON TRUSTEES.

May be obtained, by order, of all Booksellers or direct from the MINING JOURNAL Office, 26, Fleet-street, London, E.C., upon remittance of Post Office Order for the amount.

NOBEL'S DYNAMITE



Manufactured and sold by
NOBEL'S EXPLOSIVES COMPANY, LIMITED
 (FORMERLY THE BRITISH DYNAMITE COMPANY LIMITED),
 Head Office: 149, West George Street, Glasgow.
 EXPORT AGENTS: J. and G. THORNE, 85, GRACECHURCH STREET, LONDON, E.C.
 FACTORIES—ARDEER WORKS, STEVENSTON, Ayrshire.
 WESTQUARTER WORKS, POLMONT STATION, STIRLINGSHIRE.
 REDDING MOOR WORKS, POLMONT STATION, STIRLINGSHIRE

THE COTTON POWDER COMPANY (LIMITED)

RECOMMEND TO CONTRACTORS, MINERS, PIT SINKERS, QUARRYMEN, AND OTHERS, THEIR

TONITE, OR COTTON POWDER,

AS BEING THE SAFEST, CHEAPEST, AND STRONGEST OF ALL EXPLOSIVES.

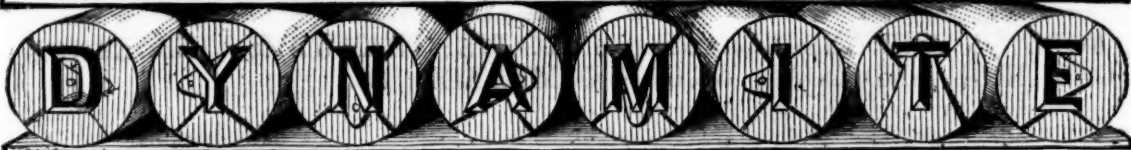
TONITE is the most efficient and economical blasting agent ever invented, and is largely in demand. It does not contain any Nitro-glycerine, and is, therefore, exempt from the dangers of exudation, or of freezing and its attendant process of thawing.

The Company also manufacture PATENT DETONATORS of a quality much superior to the foreign article. The trade supplied on favourable terms.

23, QUEEN ANNE'S GATE, LONDON, S.W.
 WORKS: FAVERSHAM, KENT.

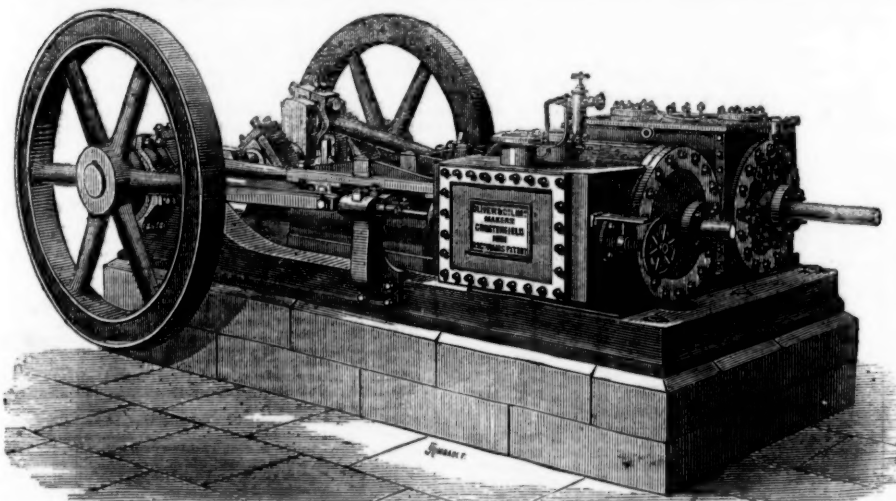
Agents: DINEEN and Co., Leeds; DAVID BURNS, Haltwhistle; R. J. CUNNACK, Helston, Cornwall; J. and W. SMITH, Chapel-en-le-Frith; W. VEITCH, Jedburgh, N.B. W. HARRISON, Barrow-in-Furness; W. J. PARRY, Bangor; HUNTER and FOTHERINGHAM, Glasgow.

RHENISH DYNAMITE COMPANY.



OF THE GREATEST STRENGTH ALLOWED BY THE EXPLOSIVES ACT.

Head Office: JOHN DARLINGTON,
 2, Coleman Street Buildings, Moorgate Street, London, E.C.
 LONDON AGENT,—E. KRAFTMEIER & CO., 5, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C.



SCHRAM'S PATENT ROCK DRILL
 AND
 Air Compressor.
 RICHARD SCHRAM & CO.,
 19, NORTHUMBERLAND STREET, CHANCERY CROSS,
 LONDON.

FURNITURE EXHIBITION—AGRICULTURAL HALL. STAND 174.

RUSTLESS IRON.

PATENTS OF PROFESSOR BARFF AND MESSRS. G. AND A. S. BOWER.

The PROCESS of COATING IRON and STEEL by these combined Patents is extremely simple and economical, requiring only a specially constructed Muffle or Furnace, which is also applicable to other purposes.

Small articles, not exceeding 9 ft. x 3 ft. x 2 ft., may now be treated at the Furnaces, at ST. NEOTS, HUNTS, on reasonable terms pending the erection of larger Furnaces by Licensees in various manufacturing centres.

LICENSEES will be granted to the Iron Trade, Hardware Manufacturers, and others on Royalties based on an average of 5 per cent on value of articles to be treated, ranging from 5s. per Ton upwards.

For Terms, Cost of Apparatus, and all other details, apply to the—

BOWER-BARFF RUSTLESS IRON COMPANY, LIMITED
 23, QUEEN VICTORIA STREET, LONDON, E.C.

For Excellence
 and Practical Success
 of Engines.



Represented
 Model exhibited by
 this Firm.

HARVEY AND CO.,
 ENGINEERS AND GENERAL MERCHANTS
 HAYLE, CORNWALL.

LONDON OFFICE.—186, GRESHAM HOUSE, E.C.

MANUFACTURERS OF
 PUMPING and other LAND ENGINES and MARINE STEAM ENGINES
 of the largest and most approved kinds in use, SUGAR MACHINERY,
 MILLWORK, MINING MACHINERY, and MACHINERY IN GENERAL.
 SHIPBUILDERS IN WOOD AND IRON.

MANUFACTURERS OF
HUSBAND'S PATENT PNEUMATIC STAMPS

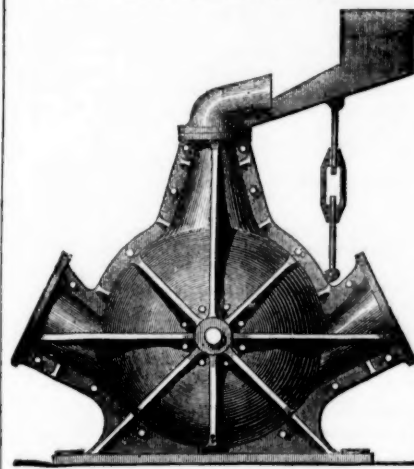
SECOND-HAND MINING MACHINERY FOR SALE,
 IN GOOD CONDITION, AT MODERATE PRICES—viz.
 PUMPING ENGINES; WINDING ENGINES; STAMPING ENGINES;
 STEAM CAPSTANS; ORE CRUSHERS; BOILERS and PITWORK of
 various sizes and descriptions; and all kinds of MATERIALS required for
 MINING PURPOSES.

JORDAN'S PATENT PULVERISING MACHINE,

FOR REDUCING

MINERALS, CHEMICALS, CEMENTS, CEREALS, &c.

T. B. JORDAN AND SON,
 52 GRACECHURCH STREET, LONDON.



SIMPLE.
 DURABLE.
 EFFECTIVE.

OTHER
 SPECIALITIES,
 GOLD
 REDUCING PLANT.
 HAND-POWER
 ROCK DRILLS
 GENERAL
 MINING PLANT.
 Illustrated Cata-
 logues on applica-
 tion.

THE
 BEST METAL FOR BUSHES,
 BEARINGS,
 SLIDE VALVES,

And other wearing parts of Machinery.

PUMPS, PLUNGERS,
 CYLINDERS, &c.

PHOSPHOR BRONZE
 WIRE, TUBES,
 SHEET, RODS
 TOOLS, &c.

STEAM
 FITTINGS.

SOLE

MANUFACTURERS,

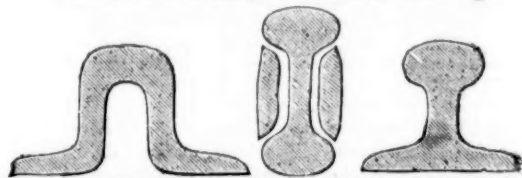
UNDER PATENTS,

THE

**PHOSPHOR BRONZE
 COMPANY, LIMITED,**

SUMNER STREET, SOUTHWARK,
 LONDON, S.E.

JOHN BEATSON & SON,
 40h, St. Mary's Gate, Derby.



IRON AND STEEL RAILS, of all sections, from 10 to 86 lbs. per
 yard, new perfect, new slightly defective, or second-hand, with Fish-plates
 Bolts and Nuts, Chairs, Spikes, and Points and Crossings to match, when re-
 quired.

STEEL AND IRON WIRE ROPES, LOCOMOTIVE ENGINES, &c., &c.
 BARS, PLATES, SHEETS, &c.
 STEEL OF ALL KINDS. FIG IRON OF ALL KINDS.
 Delivered at all Railway Stations and Ports in Great Britain.

WILLIAM BENNETTS,

PATENT MINERS'

**SAFETY FUSE
 MANUFACTURER.**



This manufacture embraces all the latest improvements for use in
 Blasting in Mines, Quarries, or for Submarine Purposes; and is
 adapted for exploding Gunpowder, Dynamite, or any other Ex-
 plosive; and is made suitable for exportation to any part of the world
 Price Lists and Sample Cards on application.

All communications to be addressed—

ROSKEAR FUSE WORKS,
 CAMBORNE CORNWALL.

SMALL ENOUGH TO CARRY IN THE POCKET ANEROID CASE.

PRACTICAL HYPSONOMETRY: A Method of DETERMINING
 ALTITUDES (Heights of Mountains and Depths of Mines) accurately and
 almost instantaneously, with the Aneroid Barometer, WITHOUT TABLES.
 Price One Shilling, post free

London: MINING JOURNAL Office 25, Fleet-street, E.C.

NON-DIVIDEND MINES—continued

NON-DIVIDEND MINES—continued

NON-DIVIDEND MINES—continued.		Paid.	Last wk.	Clos. pr.
3400.	North Green Hurth, * (3400 1/2 pd.)	0	2 0/8	3/8 3/8
2500	North Grosvenor, * s, Cardigan	1	0 1/2	1 1/8 3/8 1 1/8
12000	North Hedgesfoot, L, Liskeard	0	0 2 0/8	3/8 3/8 3/8 1 1/8
50000	North Molton, * c, m, t, Devon	1	0 0	3/8 3/8 3/8 3/8
6000	North Penruthal, t, c, Gwennap	2	7 6/8	3/8 3/8 3/8 3/8
2938	North Treskerby, c, St. Agnes	1	0 0	3/8 3/8 3/8 3/8
8000	Northern, t, Durham	8	17 10	3/8 3/8 3/8 3/8
40000	Okel Tor, t, c, a, Calstock	1	0 0	3/8 3/8 3/8 3/8
1000	Old Shepherds s-l, Cornwall	1	0 0	3/8 3/8 3/8 3/8
60000	Owen Carr, a, Brear, t, c, Marazion	1	0 0	3/8 3/8 3/8 3/8
12000	Pandora, t, Carnarvon	1	0 0	3/8 3/8 3/8 3/8
11612	Pant-y-Mwyn, t, Mold	2	0 0	3/8 3/8 3/8 3/8
20000	Parka Consols	1	0 0	3/8 3/8 3/8 3/8
45000	Parya Corporation, c, Anglesea	1	0 0	3/8 3/8 3/8 3/8
7500	Pateley Bridge, L, Yorkshire	1	0 0	3/8 3/8 3/8 3/8
4000	Pedin-an-drea, t, Redruth	2	13 0	3/8 3/8 3/8 3/8
3000	Pelyn Wood, c, Lanivry	0	5 6/8	3/8 3/8 3/8 3/8
20000	Peggarig, t, Carnartheushire	1	0 0	3/8 3/8 3/8 3/8
12000	Penn-Fraser, c, t, Flintshire	1	0 0	3/8 3/8 3/8 3/8
15000	Perran Consols, s-l, Flintshire	1	0 0	3/8 3/8 3/8 3/8
12000	Perran Wheal Alfred, c	0	2 6/8	3/8 3/8 3/8 3/8
100000	Pioneer, * var. Wales	1	0 0	3/8 3/8 3/8 3/8
3000	Polcrobo, t, Croyan	0	5 0	3/8 3/8 3/8 3/8
10000	Polrose, t, Cornwall	1	2 6/8	3/8 3/8 3/8 3/8
1000	Port Nigel, s-l, Carnarvonshire	2	0 0	3/8 3/8 3/8 3/8
8000	Prince Royal, t, c, s-l, St. Agnes	1	0 0	3/8 3/8 3/8 3/8
12000	Prince of Wales, c, t, Stock	0	17 0	3/8 3/8 3/8 3/8
10000	Royalton, t, St. Columb	0	15 6/8	3/8 3/8 3/8 3/8
30000	Russell United, * c, Tavistock	0	15 6/8	3/8 3/8 3/8 3/8
30000	Silver Hill, * Callington	1	0 0	3/8 3/8 3/8 3/8
50000	Sinclair, * l, b, Whitford	1	0 0	3/8 3/8 3/8 3/8
40000	Sortridge, c, Horrabridge	1	0 0	3/8 3/8 3/8 3/8
6000	South Carbis, t, c, Redruth	0	10 0	3/8 3/8 3/8 3/8
50000	So. Devon Unit, * c, Buckfastleigh	1	0 0	3/8 3/8 3/8 3/8
5000	South Dolcoath, c, t, Illogan	0	19 0	3/8 3/8 3/8 3/8
6000	South Penruthal, c, c, Carnarvon	5	7 6/8	3/8 3/8 3/8 3/8
2043	South Wheal Crofty, c, Illogan	2	9 6/8	3/8 3/8 3/8 3/8
40000	Tamar, s-l, Beaulieu	1	0 0	3/8 3/8 3/8 3/8
110000	Tankerville Gt. Consols, L, Salop	1	0 0	3/8 3/8 3/8 3/8
8400	Teesdale, t, Durham (pref.)	1	0 0	3/8 3/8 3/8 3/8
20000	Tin Hill, t, St. Stephens	1	0 0	3/8 3/8 3/8 3/8
12000	Tolme, c, t, Northill	0	1 6/8	3/8 3/8 3/8 3/8
6000	Tregebo, t, Cornwall	3	0 0	3/8 3/8 3/8 3/8
100000	Tresavann, t, c, Gwennap	0	2 0	3/8 3/8 3/8 3/8
8000	Trevaunance, t, St. Agnes	0	2 0	3/8 3/8 3/8 3/8
12000	Trevice Consols, c, Gwennap	0	5 0	3/8 3/8 3/8 3/8
35000	Un. Van & Glyn, * l, (t 17500 pref. sh)	1	0 0	3/8 3/8 3/8 3/8
1000	Vaughan, t, L, Cardigan	10	0 0	3/8 3/8 3/8 3/8
8000	Victor, * l, Cilcen, Flintshire	0	14 0	3/8 3/8 3/8 3/8
2000	Violet Seton, c, Carmarone	12	0 0	3/8 3/8 3/8 3/8
10000	Wincott, t, t, Alarcon	1	0 0	3/8 3/8 3/8 3/8
20000	Walkham United, * c, Tavistock	1	0 0	3/8 3/8 3/8 3/8
12000	West Assheton, l, Carnarvon	1	0 0	3/8 3/8 3/8 3/8
12000	West Caradon, c, St. Cleer	0	7 9/8	3/8 3/8 3/8 3/8
3000	W. Craven Moor, l, Pateley Bridge	10	0 0	3/8 3/8 3/8 3/8
12000	West Crebor, c, Tavistock	0	6 8/8	3/8 3/8 3/8 3/8
10240	West Devon Consols, c, Calstock	1	0 0	3/8 3/8 3/8 3/8
10000	West Godolphin, t, c, Breage	1	0 0	3/8 3/8 3/8 3/8
2000	West Kildruth, t, Cardigan	0	12 0	3/8 3/8 3/8 3/8
20000	West Lisburne, t, Cardigan	1	0 0	3/8 3/8 3/8 3/8
3000	West Mary Ann, l, Menheniot	1	0 0	3/8 3/8 3/8 3/8
20300	W. Pateley Bridge, L, Yorkshire	1	0 0	3/8 3/8 3/8 3/8
6000	West Polbreten, t, c, St. Agnes	0	5 6/8	3/8 3/8 3/8 3/8
5190	West Polidice, St. Day	6	0 0	3/8 3/8 3/8 3/8
2048	West Wheal Frances, t, Illogan	33	8 3/10	3/8 3/8 3/8 3/8
3000	West Wheal Fooror, t, Redruth	3	0 6/8	3/8 3/8 3/8 3/8
8000	Wheal Agar, c, Illogan	15	18 0	3/8 3/8 3/8 3/8
8100	Wheal Bannack, t, Illogan	6	17 0	3/8 3/8 3/8 3/8
3000	Wheal Boys, t, Redruth	6	17 0	3/8 3/8 3/8 3/8
12000	Wheal Coates, t, St. Agnes	0	2 0	3/8 3/8 3/8 3/8
2585	W. Oomf, t, No. Tres., t, c, Gwennap	2	2 0	3/8 3/8 3/8 3/8
50000	Wheal Elizabeth, * c, Cornwall	1	0 0	3/8 3/8 3/8 3/8
12238	Wheal Jane, t, Kea	2	1 6/8	3/8 3/8 3/8 3/8
12000	Wheal Jewell, c, St. Hilary	1	0 6/8	3/8 3/8 3/8 3/8
25000	Wh. Honey and Wrenthorn, s-l, Lisk.	2	0 0	3/8 3/8 3/8 3/8
8100	Wh. Hony and Wrenthorn, s-l, Lisk.	7	1 6/8	3/8 3/8 3/8 3/8
2000	Wheal Owles, t, St. Just	1	0 0	3/8 3/8 3/8 3/8
6000	Wh. Prussia, & Cardrow, t, c, Redruth	2	10 0	3/8 3/8 3/8 3/8
6000	Wheal Sisters, t, Lelant	3	10 0	3/8 3/8 3/8 3/8
4096	Wheal Uny, t, c, Redruth	16	19 6/8	3/8 3/8 3/8 3/8
4000	Ystwith, * l, Cardigan	1	0 0	3/8 3/8 3/8 3/8

GAS COMPANIES

Issue.	Shares.		Pd.	Clas. pr.
5000.	20.	Bahia [L].....	all	17½ 18½
10000.	5.	Bombay [L].....	all	38 40
10000.	5.	Ditto, New [L].....	4 4½	4 4½
29700.	Stk.	Brentford Consolidated.....	100.	150 155
14000.	20.	British.....	all	35 37
15000.	Stk.	Commercial.....	100.	193 194
5000.	20.	Continental [L].....	all	27 28
52000.	20.	Do. do. New 1861.....	100.	193 195
10000.	20.	Do. do. 7 per cent. Preference.....	all	28 28½
23408.	10.	European [L].....	all	18½ 19½
94850.	Stk.	Gaslight and Coke, A. Ord.....	100.	170 175
294200.	Stk.	Do, 4 per cent. Deb. Stock.....	100.	103 105
5003.	10.	Hong Kong and China.....	all	14½ 15½
10000.	20.	Indo-Chinese Continental.....	all	193 195
38850.	Stk.	London.....	100.	218 217
12000.	5.	Malta & Mediterranean [L].....	all	1½ 1½
100000.	Stk.	Metrop. of Melbourne &c. p. c. Deb.....	all	12½ 13½
25000.	20.	Monte Video [L].....	all	28½ 30½
10000.	5.	Ottoman [L].....	all	28½ 30½
30000.	5.	Oriental [L].....	all	6½ 7
2000.	20.	Rio de Janeiro [L].....	all	25½ 26½
50000.	Stk.	South Metropolitain.....	100.	175 180
50000.	Stk.	Ditto, ditto.....	100.	175 180

BANKS.

Issue.	Shares.	TRAMWAYS.	Pd.	Glos. pr.
40000	10	.. Anglo-Argentine [L]	all	10 11
10000	10	.. Barcelona [L]	all	5 6
7140	10	.. Belfast Street Tramways	all	7 2 8
3050	10	.. Birkenhead, Ordinary	all	2 5 3
3000	10	.. Ditto, 5 per cent. Preference	all	7 9
9290	10	.. Bristol [L]	10	8 5 9
95000	10	.. Bordeaux Tram & Omnibus [L], all	9 8	9 5 9
24000	10	.. Dublin	all	9 8 10
14690	10	.. Edinburgh Street Tramways	all	11 12 12
35000	10	.. Glasgow Tramway & Omnl. [L], 9	17	17 18
10000	10	.. Hughes Loco. and Tram. works, all	all	
7500	10	.. Hull Street Tramways	all	8 8
100	10	.. Imperial [L]	all	1 12
94000	10	.. Liverpool Unit. & Org. [L], all	13	12
25000	10	.. London [L]	all	13 13
15000	10	.. London Street Tramways	all	13 14 14
60000	10	.. North Metropolitan	all	17 17 18
18000	10	.. Nottingham and District [L]	all	9 10 10
8940	15	.. Provincial [L]	all	8 4 9
1000	10	.. Sheffield	all	6 7 7
5000	10	.. Southampton	all	6 7 7
6000	10	.. Sunderland [L]	all	1 1 2
10000	10	.. Swanes [L]	all	5 6
12000	10	.. Tramways of France [L]	all	5 6
16500	10	.. Tramways of Germany [L]	all	10 11
20000	5	.. Tramways of the North York [L], all	all	4 5 5
40000	10	.. Tramways Union [L]	all	4 5 5
25000	10	.. Vale of Clyde	6	
7200	10	.. Wolverhampton [L]	all	5 5

TELEGRAPH COMPANIES

Shares.		Pd.	Clas. pr.
Stk. Anglo-American	100	0	50% 51 1/2
10 Brazilian Submarine	10	0	11% 12 1/2
10 Cuba	10	0	8% 8 1/2
20 Spanish	20	0	8% 8 1/2
20 Direct United States Cable ..	20	0	11% 12
10 Eastern	10	0	10% 11
10 East. Exten. Austr. and China ..	10	0	11% 11 1/2
10 German Union	10	0	11% 12 1/2
10 Great Northern	10	0	12% 12 1/2
25 Indo-European	25	0	29 50
10 London Platino Brazilian	10	0	4% 5

London: Printed by RICHARD MIDDLETON, and published by HENRY ENGLISH (the proprietors), at their office 26, FLEET STREET, E.C., where all communications are requested to be addressed.—September 2, 1888.